

University of Alberta

Mental Skills Training with Competitive Swimmers 12 years of age and under

by

Janet Susan Tingley



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fulfillment of the requirements for the degree of

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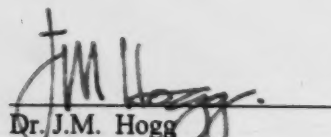
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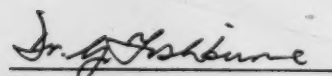
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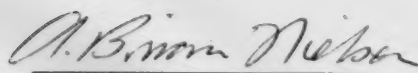
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Faculty of Graduate Studies and Research

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **Mental Skills Training with Competitive Swimmer 12 years of age and under** by Janet Susan Tingley in partial fulfillment of the requirements for the degree of **Master of Arts**.


Dr. J.M. Hogg
(supervisor)


Dr. G. Fishburne
(committee member)


Dr. A.B Nielsen
(committee member)

Dated: April 14th 1998

Dedication

To Mom and Dad, for their never ending support, motivation and love

Abstract

The purpose of this study was to implement a mental skills training program with two groups of competitive swimmers 12 years of age and under, as well as to evaluate the swimmers' awareness of mental skills and their use of these skills in competitive settings. The mental skills program used in this study followed the interactional systematic cognitive-behavioral approach (Hogg, 1997a). Swimmers' reactions concerning individual skills were reported on questionnaires for each of the specific mental skills. Semi-structured interviews following the completed program allowed swimmers to report on their awareness of mental skills and specific instances when they used mental skills. Results suggest that while young swimmers require assistance in integrating mental skills in practice and competitive settings, their understanding was such that they perceived the importance being aware of the mental skills as well as of integrating them. Following the completion of the program the swimmers shared many specific instances in which they actually applied the mental skills during competition, practice and in other life situations. The perceptions of parents and coaches supported these findings.

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Introduction

Oh, no! Just one more heat and I'm up. My heart is racing. My stomach feels horrible. Okay, jump up and down. You are going to do fine. What if I don't do my best time? What if she beats me? I wish I could just relax. Okay, breath in and out. Just try to relax and you'll be okay. I don't feel good at all. I don't want to swim this race.

Why can't I feel like I do when I'm at practice? I love going to practice and finishing a hard training set like 10 x 100 meters. I feel in great shape and really strong after one of those practices. I know that swimming is something that I am good at and that makes me feel confident.

But why don't I feel like I can swim a strong race when I get behind this starting block? As my turn to race approaches, I can feel the changes in my feelings on the inside and in the way I act. But I can't control the feelings. I don't know what to do. I know I should be thinking positively but I can't get the negative thoughts out of my mind.

Although I can not remember my exact internal dialogue at the time of competition as a young competitive swimmer, I believe that my thoughts were similar to those expressed in the opening paragraphs. I enjoyed swimming competitively. It was an activity at which I was successful and my team mates were my peer group. However, when it came time to participate in my important races at a competition, I felt that I had no real control over my feelings of anxiety and worry. I worried constantly about the results of my best events. I was worried about the time it would take me to cover the meters in the pool. If I was not thinking about my time, I was concerned with how the younger girl in the lane next to me would swim. These feelings overshadowed the

confidence I had in the physical work that had led me to be part of the swimming competitions.

It was my real experiences with cognitive anxiety or worry and apprehension during competition that led me to think, very much later, about how other swimmers deal with their levels of anxiety both in competition and in competitive practice situations. In particular, I developed an interest in how young competitors learn or are taught ways to deal with feelings of stress or anxiety which are a result of athletic endeavors. As my knowledge of how athletes cope with competition systematically increased, I also began to question how young swimmers prepare for competitive situations and how they develop a positive internal dialogue.

As a young swimmer struggling with feelings of competitive anxiety, I was exposed to very few resources to build my mental fitness. The lack of resources left me with little or no means of taking control of negative thoughts and feelings. When I began to perform well in my age group, I was moved to a swimming group that spent more time in the pool and was more serious about performance. Our coach developed a goal-setting sheet and encouraged us to meet with him at the beginning of the season to discuss our goals. After a few years, this coach left for another swimming club and a new head coach came to our club. Before important swimming competitions, this coach led us through progressive relaxation training and we practised imagining our up-coming swimming events.

I knew that what I was thinking was affecting my body's arousal state, as in a mind-body connection. However, I was not made aware of the connection between the

activities and strategies and controlling my feelings of anxiety before my swimming events. I had not developed, on my own, the ability to relax before competition nor the ability to use my swirling emotions and fleeting mood states about the competition to my advantage. I sometimes wonder if I would have been a different competitor had I received specific instruction on how to use my thoughts and feelings to facilitate my performance. I also wonder if my performance satisfaction and enjoyment of athletic performance would have been different had I participated in a systematic mental skills program focusing on the development of positive thoughts and behaviors for use in athletic situations.

Purpose of the Study

The purpose of my research was to investigate the implementation of a mental skills program designed specifically for young athletes. The main tool used in this program based on the systematic cognitive-behavioral mental skills training program utilized in Mental Skills for Young Athletes: A mental skills workbook for athletes 12 years and under (Hogg, 1997a). The specific objectives of this descriptive study were 1) to implement a mental skills training program with 2 groups of competitive swimmers under the age of 12 years; 2) to obtain the young swimmers' reactions to the program; 3) to determine the participants' awareness of the mental skills presented in the program; 4) to determine the participants' awareness of how to use the mental skills and when to use the skills; and 5) to determine the swimmers' actual use of the mental skills involved in the program.

Significance of the Study

Weinberg and Gould (1995) stated that many coaches and athletes do not know how to teach mental skills or how to practice them. It is often assumed that athletes know how to relax or how to concentrate and simply need reminders to engage in these skills. In actual fact, the mental skill of concentration or of relaxation, just for example, may not be natural for all young athletes. One young athlete, aged 13, had this to say about his ability to deal with competitive situations, "Some adults believe that kids don't get stressed. These adults need to realize that we are just like them, and we need to have strategies to deal with our stress" (Gould, Wilson, Tuffey, and Lochbaum, 1993, pg. 291).

An educational mental skills program focusing on information and strategies related to staying calm and positive, and maintaining concentration could help young athletes develop strategies and abilities to successfully deal with competitive environments. It has been suggested that a mental skills training program can assist young athletes under 12 years of age to develop greater performance satisfaction (Hogg, 1997a), to develop a positive affect toward themselves and to enhance their ability to control their negative thoughts and feelings (Orlick & McCaffrey, 1991), to give young athletes time to develop successful strategies for dealing with competitive situations (Orlick & Zitzelsberger, 1991), and, finally, to increase their level of performance (Weinberg & Gould, 1995).

Coaches of organized sport provide ample opportunities for young athletes to develop specific physical skills required for successful participation in sport. Athletes and their coaches often focus their efforts on physical and technical aspects of

performance at the expense of mental preparation (Hogg, 1997c) or, as stated above, they do not know how to teach or practice these skills. "Just as physical skills and their sequential development are important to each athlete, the same applies to mental skills," (Hogg, 1995a, p. 16). It may be possible for athletes to develop mental skills in the same way they develop their physical skills with practice and instruction. However, even with practice and instruction, not all athletes are able to learn or execute physical skills on the same level. It is important to consider the individual differences of young athletes including physical, biological, psychological and social areas of development (Weiss, 1991). This suggests that there are many developmental factors influencing the performance of young athletes and several factors will be discussed later.

There is a lack of research involving the implementation of a systematic, mental skills training program with young athletes as participants (Vealey, 1994). Researchers have used older participants in studies involving the presentation of mental skills via group sessions, reading assignments, journals, and exercises (Beauchamp, Halliwell, Fournier, & Koestner, 1996; Daw & Burton, 1994; Gould, Petlichkoff, Hodge, & Simons, 1990; Hughes, 1990; Kendall, Hrycaiko, Martin, & Kendall, 1990; Seabourne, Weinberg, Jackson, & Suinn, 1985). Although, the age of the subjects in these studies ranged from 15 to 32 years, relevant information regarding the content and implementation of a mental skills training program and the content were taken from these studies and incorporated into this study.

This study exclusively used subjects of 12 years of age and under to address a void in the literature. It was anticipated that this investigation would provide rewarding

insights, feedback on how to develop future approaches to mental skills training programs as well as useful guidelines for further research in the area of applied mental skills training for all concerned with young athletes. It has been suggested that providing detailed descriptions of the process of implementing a psychological skills training program could provide worthwhile information concerning the specific mental strategies that athletes employ for successful performances (Vealey, 1994). Information about successful mental skills and strategies plus information about the process of program implementation may assist others in developing and applying sound mental skills programs for young athletes as well as for older athletes.

Mental Skills and Mental Skills Training

Vealey (1994) defined the term psychological skills training as "(...) describe(ing) techniques and strategies designed to teach or enhance mental skills that facilitate performance and a positive approach to sport competition" (p. 495). Another definition of psychological skills training was suggested by Wann (1997, p.4): " (...) a comprehensive intervention package designed to educate and train athletes in mental preparation." Williams and Staub (1993) suggested that the goal of psychological training is to learn to consistently create an ideal mental state that allows athletes to perform at their best. These definitions suggest that mental skills training programs can include a variety of techniques in a comprehensive program to assist athletes in developing consistent, positive pre-competition mental states.

Fully developed or comprehensive mental skills training programs include psychological skills and techniques such as anxiety management, goal setting,

concentration, self-talk, thought stopping and routines (Weinberg & Williams, 1993). The definitions of mental skills and mental skills techniques used to describe the work in which applied sport psychologists are involved are often varied. A skill, mental or physical, involves proficiency, competence, and expertise that can be developed through skills training (Nelson-Jones, 1991). According to Vealey (1994), mental skills are qualities to be developed by athletes. These mental skills are: (1) coping with competitive anxiety, (2) focusing attention on performance, and (3) improving self-confidence. Weiss (1991) identified positive self perceptions, intrinsic motivation, positive attitude toward physical activity, coping with anxiety and stress in sport, and sportsmanship or moral development as psychological skills which she has emphasized in her work with young athletes.

Psychological methods were defined by Weiss (1991) as "procedures or strategies for bringing about change in psychological skills," (p. 340). One of these psychological methods was individual control strategies which included problem-solving, self-talk, goal-setting, relaxation skills, and mental imagery. Weinberg and Williams (1993) also indicated that psychological skills can be enhanced through a set of specific methods. The methods they identified were goal-setting, imagery, relaxation, thought control, physical practice, and education. The most popular techniques and strategies available to help athletes improve their mental qualities or skills are imagery, goal setting, and arousal regulation (Vealey, 1994).

Psychological skills have been labelled by others in a different manner. Orlick and McCaffrey (1991) identified imagery, goal setting, relaxation, focusing, and

refocusing as important mental skills to teach children. Hogg (1995b) also identified several important mental skills for athletes: self-awareness, goal setting, relaxation and energizing, self-talk, imagery, and attentional control. These mental skills were developed from information emerging from research on mental skills training and also from psychological attributes that athletes themselves identified as important for competition. These attributes included high levels of self-confidence, an ability to use emotional energies advantageously, greater powers of concentration, relaxation, and imagery, being goal driven, and in control of thoughts, feelings, and actions (Hogg, 1995b, p. v). Whether relaxation or concentration, just for example, are mental skills or methods to enhance mental skills, they can be included in a mental skills training program for athletes.

Successful athletes have stressed the importance of developing and practising pre-competition plans and competition focus plans (Orlick & Partington, 1988). The plans of these athletes have included several mental skills including imagery, self-talk, and focusing/refocusing. Wann (1997) suggested that developing and practising pre-competition plans to assist athletes in their mental preparation occurs in 5 stages. These stages were considered to be (1) education, (2) development of an individualized program based on an assessment of an athlete's psychological skills, (3) acquisition of the mental skills, (4) practising of the skills and (5) evaluation of the psychological skills training program.

A Model of Mental Skills Training Programs

The mental skills training model used in Mental Skills for Young Athletes: A

mental skills workbook for athletes 12 years and under (Hogg, 1997a) was employed in this research. It used a systematic, interactional, and cognitive-behavioral approach which was initially developed for athletes 13 years and over (Hogg, 1995a). A cognitive-behavioral approach to mental skills training refers to techniques available to assist athletes to deal effectively with thoughts and emotions related to competitive environments (Beauchamp et al., 1996). Hogg's model of a mental skills training program incorporates a systematic approach including: (1) understanding the concepts then teaching the skills, (2) integrating them into the practice and competition setting, (3) monitoring the use of the skills, (4) evaluating the effectiveness of the skills, and (5) refining the skills. The interactional component of the program refers to the importance of coaches and athletes working together to improve the athletes' mental skills and to integrate strategies into daily practice and competitive situations.

In Hogg's (1997) model of a mental skills training program, the program content is divided into three areas. One content area includes six foundational mental skills which include self-awareness, goal-setting, relaxation and energizing, self-talk, imagery, and attentional control. These six mental skills are presented through the systematic process of teaching, integrating, monitoring, evaluating, and refining. The other two areas included in the program model are creating and maintaining ideal performance states and creating and maintaining ideal emotional states. Both areas are presented through a systematic process also. Creating and maintaining ideal performance states involves the creation of planned routines to establish consistency in a variety of practice and competition conditions. Creating and maintaining ideal emotional states involves

learning about the negative and positive aspects of emotions and how emotions can be used to advantage.

Definitions

As the main tool used was modelled on Mental Skills for Young Athletes (Hogg, 1997a), the terms used to describe the program and its components are based on this text.

A Mental Skill: A mental skill refers to knowledge and application of concepts related to the development of awareness of how specific thoughts and feelings can effect athletic performance and/or performance satisfaction. For the purposes of this study, the foundational mental skills are self-awareness, goal-setting, relaxation and energizing, self-talk, imagery, and focusing/refocusing.

Mental Skills Training Program: This is an educational program which presents six mental skills in a systematic manner. Each skill is introduced, important concepts related to these skills are explained, exercises that reinforce these concepts are taught and athletes are encouraged to integrate the mental skills into competitive and practice situations. Athletes are also encouraged to monitor, evaluate, and refine their mental skills with the help of their coaches and parents.

Interactive-Cognitive-Behavioral Approach: This is an approach to mental skills training emphasising the successful combination of both positive thoughts, feelings and behaviors. It is necessary to first develop an awareness of one's self-destructive thoughts about competitive situations and ineffective behaviors that result from these self-defeating thoughts. It is also important to become aware of one's feelings and emotions and the way in which one's thoughts, feelings and behaviors influence each other. This

approach is designed to encourage athletes and coaches to work together primarily to develop an awareness of the athletes' thoughts and feelings and encourage a sense of control.

Concepts: A concept is an idea or thought that embodies those notions associated with mental skills. For example, the skill of self-awareness might include such concepts as self-image, self-confidence or self-esteem; the skill of goal-setting that of motivation; or the skill of attentional control that of concentration and focus.

The Skill of Self Awareness: The process of becoming aware of one's potential as an athlete. It is the degree to which one can recognize one's strengths and weakness as they relate to the four components of athletic performance (physical, tactical, technical, and mental) and improve in such a way as to reach one's full potential.

The Skill of Goal-Setting: The process of establishing realistic expectations of one's athletic performance, by focusing on the process of the performance and on the performance outcome to the extent this can be controlled. It is the degree to which one can set meaningful, measurable, and challenging objectives that can move one to performance satisfaction.

The Skill of Relaxation and Energizing: The process of recognizing one's physical and mental states prior to, during and following performance. It is the degree to which one can respond with varying states of relaxation or activation depending on the level of intensity arising from the competitive environment.

The Skill of Self-Talk: The process of giving meaning to internal dialogue. It is the degree to which one indulges in positive self-statements or controls negative attributes.

The Skill of Imagery: The process of using one's thoughts and feelings to reproduce a detailed picture of the task. It is the degree to which one can create and maintain a flawless image of performance or aspects of performance.

The Skill of Focusing/Refocusing: The process of concentrating on the task at hand by attending only to relevant performance stimuli. It is the degree to which one can sift cues in the here and now to focus only on those that are significant for performance while avoiding all distractions.

Ideal Performance State: The process of formulating and integrating a plan, utilizing appropriate mental skills, in order to create the best possible conditions for controlling performance.

Delimitations

1. Although Mental Skills for Young Athletes (Hogg, 1997a) was designed to meet the needs of athletes across a variety of sports, the participants in this study were young competitive swimmers ranging in ages from 9 to 12 years.
2. Coaches of the local swim team identified the groups of swimmers that they wished to be exposed to the mental skills program. These groups were composed not only of swimmers under 12 years but swimmers 13 and 14 years of age. However, this study was confined to obtaining the perspectives of 12 and unders.

Limitations

1. Due to the qualitative nature of this study, it may be suggested that all interpretations of the swimmers' perspectives of the mental skills program are subject to different meanings.

2. It may be suggested that conflict arises as a result of the researcher's dual role of program leader and interviewer. However, I believe that I developed greater insight by observing the swimmers' interaction during the mental skills training sessions and interviewing the swimmers following completion of the program. It may also be suggested that my interpretations of the findings may be biased due to my experiences as a young athlete. I believe, all findings, be they positive or negative, can be significant in developing effective mental skills training programs and in suggesting effective ways to implement training programs.

It was my desire to expose the young swimmers to a superior mental skills program. To ensure the program was the best it could be, I needed to make it relevant to the athletes needs, desires and interests. I felt I was an excellent candidate to implement a mental skills training program to young swimmers due to my experience with competitive swimming as a young person as well as my experience with poor mental preparation for competition. I have an understanding of the process of swimming practices and competitions and the terms or words involved in competitive swimming.

I believe that the swimmers' input about the program and their experience using the mental skills is very important. The young athletes, like others, need to know that I am interested in who they are as people not only as research participants. My extended participation with the swimmers along with sharing my experiences with swimming may encourage these young athletes to share their experiences or feel more comfortable in participating in the discussions of the program components.

3. As well as a delimitation of this study, the age range of the swimmers involved

could also be considered a limitation. I was unable to obtain the perspectives of swimmers younger than 9 years of age although the program was developed for any athlete under the age of 12. Collecting the perspectives of swimmers younger than 9 years may have been significant in developing a suggested age range for this program. However, the swimming club's arrangement of the groups did not allow me to isolate the ideal group for this study in terms of the participants' age.

Summary

There is little evidence of researchers involving young athletes as participants in studies involving mental skills training programs (Vealey, 1994). This study sought to implement a systematic, cognitive-behavioral mental skills training program (Hogg, 1997) with 2 groups of young competitive swimmers 12 years of age and under. It is believed that this research can provide worthwhile findings, from the athletes' perspective, regarding the implementation of a mental skills training program. These findings may serve as a basis for future research as well as for future implementations of similar mental skills training programs.

Literature Review

It has been suggested that sport psychology is "primarily the scientific study of behavioral, affective, and cognitive reactions to sport settings, including the reactions of both participants and fans" (Wann, 1997, p. 4). Applied sport psychology has been defined as focusing on an area of sport psychology that attempts to "identify(ing) and understand(ing) psychological theories and techniques that can be applied to sport and exercise to enhance the performance and growth of athletes and physical activity

participants" (Williams & Straub, 1993, p. 1). In a review of the current status of sport psychology interventions, Vealey (1994) provided a brief history of the development of applied sport psychology.

It was during the 1970s that researchers began to develop psychological skills training programs to educate athletes about mental techniques and strategies. These techniques and strategies were aimed at positively enhancing performance levels as well as improving athletes' attitudes toward competition. The interest in developing psychological skills programs for athletes continues to grow in the 1990s (Vealey, 1994). In recent years, two specific sport psychologies have emerged in the field: academic and applied sport psychology (Cox, 1998). Academic sport psychology has focused on research on a variety of topics in the field of sport psychology while applied sport psychology refers to the process of providing services to athletes by way of psychological skills training programs or interventions.

Review of Mental Skills Training Interventions

Reviewers of sport psychology interventions have described the forms and approaches that have been used in research studies to teach mental skills in an athletic context (Vealey, 1994; Weinberg & Comar, 1994; Greenspan & Feltz, 1989). Greenspan and Feltz (1989) categorized psychological interventions used in research studies into three separate areas. These three approaches were: (1) interventions using relaxation training, (2) interventions using behavioral techniques, and (3) interventions using techniques for cognitive restructuring. The majority of these interventions (74%) employed an educational form as they focused on the development of specific

psychological skills to enhance the participation motivation and the participation satisfaction of the athletes who participated in these studies.

The remedial study utilizes another form of psychological intervention. Greenspan & Feltz (1989) described a remedial intervention as involving several steps: communication of a problem by an athlete, an evaluation of the athlete experiencing the problem, development of an intervention, and finally an assessment of the intervention. Vealey (1994) indicated that the majority of interventions (75%) reviewed for her paper on sport psychology interventions followed a remedial approach. In this follow up review to the review by Greenspan & Feltz (1989), interventions were again categorized into three areas. These areas were: (1) a cognitive approach; (2) a cognitive-behavioral approach; and (3) behavioral approach. As stated by Vealey (1994), interventions that employ a cognitive approach focus on restructuring thoughts and/or developing appropriate thoughts relating to the competitive setting. Behavioral interventions include developing behaviors for competition through the use of feedback in the form of reinforcement or punishment. Whereas, the cognitive-behavioral approach combines cognitive restructuring and the development of positive cognitions with the development of appropriate behaviors for the competitive setting (Vealey, 1994). The cognitive-behavioral approach emphasizes the successful combination of thoughts and behaviors by developing an awareness of self-destructive thoughts about competitive situations and ineffective behaviors that result from these self-defeating thoughts.

Applied sport psychology is an area in which cognitive-behavioral approaches are used outside the traditional mental health context (Craighead, Craighead, Kazdin, &

Mahoney, 1994). Helping athletes deal effectively with the thoughts and emotions they experience in a competitive setting while encouraging the use of appropriate behaviors is the common focus shared by the cognitive-behavioral techniques used in this type of approach (Beauchamp et al., 1996). Sport psychology practitioners are increasingly using the cognitive-behavioral approach in applied mental skills training research (Vealey, 1994).

Greenspan & Feltz (1989) reported that the majority (78%) of the interventions described in their review were comprised of several components with relaxation training as only one part of the program. Of the studies reviewed by Vealey (1994), 67% of the interventions combined several strategies or components. The more recent psychology interventions designed for athletes consistently include a combination of more than one component (Vealey, 1994; Weinberg & Comar, 1994). Due to the fact that individual athletes may respond to a psychological skill or a strategy in a different manner, it is essential to expose athletes to a variety of strategies designed to enhance their performance and their satisfaction with that performance rather than focusing on one strategy. In this study, a mental skills training program using a cognitive-behavioral approach with a variety of components will be employed.

It has been suggested that there is a need for individuals who work in the area of applied sport psychology to critically examine the effectiveness of the psychological skills interventions they utilize (Vealey, 1994; Greenspan & Feltz, 1989). Greenspan and Feltz (1989) stated that the results of the interventions included in their review indicated improvements in the participants' performances. Out of the 11 research studies in which

it was possible to infer causality, the implementation of mental skills improved the performance of the participants in 8 of the 11 studies. Due to concerns or weaknesses in several studies, it could not be inferred that the cause of performance or satisfaction enhancement was a direct result of the psychological interventions in each case. Vealey (1994) evaluated 11 studies including 12 different interventions. According to the researchers, the results of each of the psychological intervention studies indicated all of the different types of interventions were effective.

Greenspan and Feltz (1989) and Vealey (1994) have both described issues or concerns that detract from the strength of the psychological intervention studies. These issues are important to consider for future research to enhance the knowledge base of applied sport psychology. Researchers have expressed the importance of and interest in young athletes being included as subjects in programs designed to teach mental skills (Weiss, 1991; Orlick & McCaffrey, 1991). Only two of the studies included in the review by Greenspan and Feltz (1989) utilized young athletes (18 and under) as research participants with no studies involving participants under the age of 12. Vealey (1994) indicated that a need still exists for intervention studies that include a variety of participants of younger age groups to examine the effects of psychological interventions. Participants in this study will be young swimmers under the age of 12.

Detailed manipulation checks have been identified as an important aspect of a well designed psychological skills intervention study (Greenspan & Feltz, 1989; Vealey, 1994; Weinberg & Comar, 1994). Manipulation checks have been defined as those strategies used to evaluate how the participants experience each of the components

involved in a program. In a program with more than one component, it is important to assess each separately. By using these checks, it may be possible to pinpoint the specific components of a program that are effective in changing performance or performance satisfaction rather than simply describing the entire program as effective.

Minimal checks involve simple evaluations of how helpful and interesting the program as a whole has been for the participants. When checks include simple evaluations of each component of the program and assess how the participants were affected by the components, they are considered adequate. Detailed manipulation checks are not used consistently in the applied mental skills research (Greenspan & Feltz, 1989). These checks involve evaluation of each component on a variety of different aspects. For example, a detailed manipulation check of an imagery component could include assessing the ability of the participants to produce vivid images or the ability to use an internal and an external perspective in their imagery (Weinberg & Comar, 1994).

It has been suggested that researchers need to improve their descriptions of the interventions that they use in their studies (Vealey, 1994). Howlett and Hogg (1997) reviewed intervention and consulting research articles published in The Sport Psychologist between 1987 and 1995. The authors suggested that few practitioners provide detailed information regarding several components of a mental skills training program: the format, one-on-one sessions vs. group sessions; the various phases of the implementation procedure; the specific content of the program, or mental skills; and the specific tools or exercises used to help athletes practice the mental skills. Each of the components should be described in enough detail so that a reader knows the content of

each session with the athletes, the length and the amount of sessions and the stages of implementation.

There is support for the use of qualitative research approaches to accomplish this rich description (Vealey, 1994; Weinberg & Comar, 1994). Vealey (1994) identified the gathering of athletes' responses to and perceptions of sport psychology intervention as an important area of intervention research. Not only can descriptive studies provide evidence of the effectiveness of mental skills training programs, they can give the readers an in-depth and detailed description of the program. Describing the athletes' thoughts and perceptions of a mental skills program can add insight to the data gathered by quantitative types of measures (Weinberg & Comar, 1994).

Studies involving Mental Skills Training Programs

Few investigations have evaluated the impact of a systematic mental skills training program on performance levels and on the performance cognitions of athletes (Daw & Burton, 1994). There have been recent investigations evaluating the use of mental skills programs to enhance athletic performance (Beauchamp, Halliwell, Fournier & Koestner, 1996; Daw & Burton, 1994; Hughes, 1990; Kendall, Hrycaiko, Martin & Kendall, 1990; Hellstedt, 1987; Seabourne, Weinberg, Jackson & Suinn, 1985). Through a series of group discussions or educative classes, these investigations have incorporated several of the mental skills described in Mental Skills for Young Athletes (Hogg, 1997a) into a packaged program. Measures of motivation, increased knowledge of mental skills, perceived importance of mental skills, and the continued use of the mental skills included in a mental skills program have also been used to evaluate the effectiveness of

interventions (Beauchamp, et al, 1996; Gould, Petlichkoff, Hodge & Simons, 1990). These interventions also included sessions in which mental skills were taught; all are summarized and evaluated in the following pages. These studies were included because (1) the interventions utilized more than two of the mental skills included in Mental Skills for Young Athletes (Hogg, 1997a) and (2) the mental skills were introduced in group sessions or classes.

Kendall and her colleagues (1990) investigated the effectiveness of a psychological skills training package with collegiate basketball players. The investigators reported that the average score of correct basketball skill performance increased significantly for the four participants following the mental skills intervention package. Of the 4 female collegiate basketball players ages 18 to 22 years, 3 basketball players were consistently performing better following the package despite the level of competition faced in each game. Logbook entries and a questionnaire were used to evaluate the social validation of the mental skills program. Each of the participants reported a positive and confident attitude toward the mental skills and that the skills improved their ability to mentally rehearse their physical skills. The authors suggested that the mental skills package is an effective way to introduce mental skills and to teach athletes strategies to incorporate mental skills into competitive settings.

By using a single-subject experimental design, a baseline of the targeted basketball skill of each participant was measured by both the head coach and an experimenter before the package was introduced. The skill was measured during games by using a videotape and an analysis instrument developed by the researchers. The

mental skills package used in the study by Kendall et al. (1990) was introduced following the baseline evaluation. The skills of imagery, relaxation, and self-talk were introduced and practiced during 5 sessions.

The investigators suggested that a weakness of this study was the lack of detailed manipulation checks for the individual skills in which the participants were engaged. Therefore, they were unable to determine the skills or components of the package were which were successful in bringing about the changes in the targeted basketball skill. Also, the investigators made no attempt to track the amount of practice time each player spent on the targeted skill. The performance of a skill may be dependent on a host of factors including but not only practice time, physical fitness, mental preparation, and tactical preparation. The investigators discussed the tactics of the opposition but did not report detailed descriptions of the physical preparation and practice time of the four participants.

Daw and Burton (1994) used a variety of qualitative and quantitative methods to measure the effectiveness of a comprehensive psychological skills training program for tennis (PSTT). The purpose of the study was to evaluate the performance cognitions and several performance variables of 6 male and 6 female collegiate tennis players aged 18-23 years following the implementation of the PSTT. The PSTT for tennis included individual and group sessions focusing on (1) the importance of mental skills training; (2) goal-setting (performance versus outcome goals and short term and long term goals); and imagery sessions (vividness and controllability).

The authors indicated that the results suggested an increase (1) in the tennis

players' ability to pinpoint psychological skills important for their games; (2) the development of strategies to improve their psychological skills; and (3) the implementation of mental strategies into their tennis games. This information was particularly salient in the description of the two case studies. For example, one tennis player pinpointed imagery, relaxation, and a thought-stopping plan as helpful to his tennis performance. It was through two case studies that the investigators could identify the strategies the two tennis players employed to enhance their level of performance and the strategies used to regain their composure following disappointing performances. Daw and Burton (1994) suggested that the case study was a useful method to assess the athletes' competitive cognitions and thus was included as an evaluation method due to the program's individual focus. However, the case studies only focused on two of the tennis players most committed to the program and to the integration of the mental skills into their tennis game. The perspectives of the tennis players who showed less commitment or dedication to the mental skills program were not represented.

Seabourne et al. (1985) stated that the purpose of their study was to investigate the effectiveness of different mental intervention strategies with forty-three (43) male, college students in a beginner karate class. Each of the participants were randomly assigned to one of five groups: (1) three experimental groups, (2) a placebo group, or (3) a control group. Depending on the experimental group in which the participant was assigned, an individual was either exposed to (1) a mental skills training program individually tailored to each participant's need; (2) or a packaged mental skills program yoked to an individual in the tailored group; (3) or the same information for all athletes in

the group developed in a packaged format.

The program in the packaged group consisted of Suinn's mental skills program (1983) "Seven Steps to Peak Performance" (relaxation training, stress management, positive thought control, self-regulation, mental rehearsal, concentration, and energy control) which they learned in a session outside of the class time. Participants in the placebo control group were exposed to quotations from Chinese writings and were asked to memorize these sayings. The control group consisted of participants who had volunteered for the study but were not exposed to any information. During the span of the karate program, the subjects participated in 45 hours of class time of which 3.5 hours were devoted to practising the mental skills strategies with the help of the instructor.

It was reported that the group who was exposed to the individually tailored mental skills program had enhanced their performance significantly more than the yoked, placebo, and control groups. The authors stated:

"With increased interactions that sport psychologists are having with athletes and teams in applied and field settings, it seems imperative that these situations produce positive experiences in terms of performance and personal growth (Seabourne et al, 1985, p. 50)."

The logbook entries and questionnaires designed to evaluate the use of the mental skills indicated that the subjects were interested in the skills and considered them valuable and beneficial to their karate performance. The karate students were not asked which specific skill were the most valuable or beneficial.

Gould et al (1990) investigated the effectiveness of a psychological skills educational workshop over a three month period with two groups: (1) 18 senior elite

wrestlers ranging in age from 17 to 32 years and (2) 42 junior elite wrestlers, aged 14 to 18. The investigators used two similar studies to evaluate the athletes' knowledge of the mental skills information presented, their perspective on the importance of the mental skills, and their actual use of the information and mental skills strategies.

Each of the 4-hour group sessions followed a similar framework. Relaxation, visualization/imagery, goal-setting, and mental preparation were defined, the effects or influence of the components on performance was described, and specific strategies that the athletes could use in practice or competitions were presented. Included in the relaxation component were strategies to relax major muscles in increasingly more competitive situations. During the visualization/imagery session, investigators exposed focused on different imagery characteristics (vividness, clarity, controllability, and internal images) as well as several phases of imagery (guided practice, self-directed imagery, using imagery in practices, and using imagery in competition). The investigators emphasized information about performance and outcome goals, strategies to set goals, and the strategies to evaluate them in the hour session on goal-setting. The mental preparation training component focused on encouraging the athletes to identify their own optimum level of arousal and their personal mental preparation plan to reach their optimum level. The authors provided an acceptable description of the mental skills program.

The authors reported that the skills which involved on-the-mat practice sessions (relaxation and visualization/imagery) were rated as most important and more athletes in both groups planned to use those skills in the future. Through the use of questionnaires,

the investigators of this study were able to discern which of the mental components included in the mental skills training program were the most important to the athletes and which they would continue to use in the future. The implications of this information are twofold. Firstly, due to the fact that the most important and useful mental skills were reported to be those that involved on-the-mat practice sessions, there seems to be support for an integration component in teaching a mental skills program. Simply presenting the mental skills and describing the strategies to be used in competitive situations may be insufficient. The investigators suggested that the athletes rated these skills differently because the practice sessions increased the saliency of these skills and gave the athletes time to individualize the strategies for their own performances. The second implication is that this information, gathered from detailed manipulation checks, can be used to encourage coaches to integrate a mental skills training program within their athletic program. Coaches can be instructed about the importance of providing sufficient practice time for athletes to implement the mental skills into daily practice and competitive situations.

Beauchamp and his colleagues (1996) evaluated the effects of a cognitive-behavioral psychological skills training program on the motivation, preparation and putting performance of 48 male and 17 female college students enrolled in a physical education golf class lasting 14 weeks. The program, based on a mental skills program by Boucher and Rotella (1987) and Suinn (1986), included relaxation training, stress management, positive thought control and mental rehearsal. The authors believed that a cognitive-behavioral approach, which involves learning to optimize both internal

thoughts and overt behaviors, would help golfers to maximize their performance.

The greatest increase in putting performance was reported in the cognitive-behavioral mental skills training group. In comparison to the physical skills group and the control group, the mental skills training group also showed the only significant increase in intrinsic motivation and use of pre-putt routines. The authors of this study did not include group mental skills training sessions as a component separate from the physical skill classes. Therefore, the instruction of the physical skills and mental skills related to golf and specifically the golf putt were given in the same class which was 1 hour and 45 minutes in length. This integration of the mental skills, as discussed in the study by Gould and his colleagues (1990), could have allowed the mental skills group ample opportunity to individualize the mental skills and effectively practice successful pre-paid routines.

It has been suggested that researchers describe their program components in full detail (Vealey, 1994) and the implementation of this program could certainly have been described more fully. The authors stated that the golfers were required to use training logs to document their use of the pre-paid routine and the mental skills of which the routine was comprised. It would have been interesting and worthwhile to have learned of the golfers perspective on how they developed their routine, which of the skills were important to them, and how they were able to use their routine during performance. Unfortunately, the golfers' training logs were not included as part of the results.

An investigation by Hellstedt (1987) sought to involve younger, developing athletes in a mental skills training program. The purpose of the investigation was to

improve the performance of 30 male and 17 female alpine skiers, aged 12 to 18 through the use of successful mental preparation strategies. Motivation, arousal control, imagery, and goal-setting were first covered in 4 weekend, group sessions during the precompetitive season. Reading and writing work was assigned before each weekend session. A general overview of the topics was discussed in a 2 hour meeting. Smaller group discussions, with 10 athletes in each group, were held on the following day. The written and reading assignments and how they were relevant to skiing performance were discussed in these smaller groups. During the competitive season, small groups of 4 to 10 athletes would meet for 45 minutes to discuss the topics of motivation, arousal control, imagery, goal-setting, concentration, cognitive restructuring, coping strategies and prerace mental preparation.

The author reported that each of the components were rated 'somewhat useful' to 'very useful' with relaxation, anxiety reduction and mental imagery training rated as the most useful. The author also reported a significant decrease in the skiers' trait anxiety scores. This finding suggested that the program assisted the athletes to control their competitive anxiety. The coaches were also asked to evaluate the components of the mental skills program. Each of the program components were rated as 'very useful' by the coaches. The athletes' ratings indicated that the practical strategies were more useful as compared to theoretical information about each topic in the mental skills program. It was suggested that participants valued practical strategies and techniques that can be integrated into daily practice as well as before competitive performance.

This is similar to the information from other studies (Gould et al., 1990;

Beauchamp, et al., 1996) that indicated the ability to quickly integrate mental skills into athletic performance increases the athletes' use of those mental skills and increases the importance of mental skills from the athletes' perspective. The mental skills program used in this study was very well documented. The author described each of the sessions in detail including the length, the discussion topics, a description of the specific techniques and strategies taught relating to each topic and the types of exercises used to reinforce the topics. The author stated that, although the athletes indicated that practical techniques were the most important part of the mental skills program, conceptual information was also needed for a strong, systematic approach to teaching mental skills.

"Coaches must not overlook how athletes value being taught simple techniques of how to get ready for a race and how to calm down in the starting gate, and athletes need to understand how psychological concepts provide a foundation for useful mental preparation skills (Hellstedt, 1987, p. 65)."

Mental Skills and Young Children

The previous sections of this review of literature have concentrated on general reviews of mental skills interventions and specific studies evaluating the effectiveness of mental skills training programs. The next sections focus on research related to presenting mental skills to children 12 years of age and under and the developmental issues of children of this age group. Although no studies have reported findings related to implementing a mental skills training program with young athletes 12 years and under, researchers have voiced their support for teaching mental skills to athletes of this age group (Orlick, 1995; Weiss, 1991; Orlick & McCaffrey, 1991; Vealey, 1988).

Researchers have stated that teaching mental skills at an early age can provide children

with a head start in developing strategies they can use to cope effectively with situations both in sport and in life (Orlick, 1995; Weiss, 1991). For these researchers, the importance of teaching children mental skills does not revolve around enhancing levels of athletic performance but enhancing personal development.

"Moreover, [individual control strategies] have been addressed primarily in their relation to performance enhancement with elite adult athletes and less with personal development and/or young athletes (Weiss, 1991, p. 347)."

Personal Development

As a result of the large number of young people involved in organized, competitive sport in North America, a number of young athletes may exist who could benefit from specific strategies to assist them in their psychological development in sport (Weiss, 1991). Psychological development in sport does not occur without some interaction with other areas of development. Weiss (1991) presented these important development areas and their interactional nature in the "Wheel of Child Development"(see Appendix M). The child is at the centre of this wheel surrounded by the four individual factors of physical, biological, psychological, and social development. Beyond the individual factors lay other social contextual factors such as sociocultural attributes, significant others, and the sport structure. All of which can impact the child's development in sport. Broken lines separate both the individual and social contextual factors which represent an openness of the system to a variety of different interactions. Weiss (1991) has urged researchers studying aspects of youth sport to consider the interaction of these factors and the young athletes' individual differences. While being

aware of the children's social and individual factors, Weiss (1991) has pointed out that young children can be positively influenced by individual control strategies such as self-talk, goal-setting, relaxation skills, and mental imagery skills.

Orlick (1995) stated that young children are capable of learning a variety of mental skills like positive thinking, effective communication, creative imagery, goal setting, stress control, focusing, and refocusing. The advantage of exposing children to mental skills training rests on the belief that these skills have a positive effect on the children's perspective of themselves and their ability to control their negative thoughts and feelings about their lives and sport experience (Orlick & McCaffrey, 1991).

"Our ultimate goal with children is to teach them relevant cooperative values, mental skills, and positive perspectives that will enhance their quality of living. There is great advantage in beginning this process at an early age to establish a concrete foundation of belief in themselves and in their capacity to directly influence the course of their lives" (Orlick & Zitzelsberger, 1991, p.336).

Galahue (1993) suggested that children can develop a positive view of themselves, or a positive self-concept, through effective goal setting and realistic self-assessment. According to Galahue (1993), the components of a positive self-concept are competence, worthiness, acceptance, uniqueness, and virtue or sportsmanship. The development of a positive self-concept may enhance children's feelings of security and feelings of status or position in a peer group. The mental skills of self-awareness and goal setting may have an effect on the affective development of children, or in other words how they feel about themselves as people or as athletes. Children who are taught these skills and who are encouraged to integrate and refine them as they grow older may reap the benefits of enhanced satisfaction in their own abilities and performance (Hogg, 1997a).

Orlick (1995) and Weiss (1991) have supported the introduction of mental skills to children for use not only in the sport domain but as life skills to be used in many everyday situations especially in school settings. Cox & Orlick (1995) have reported that children were able to learn relaxation strategies and applied them in stressful situations at school, in sports, with other people like siblings, or when they felt sick or got hurt. School, sports, dance, art, music, and interactions within the home and in the community are areas in which applying the mental skills has been suggested (Orlick, 1995). Children who are involved in mental training early in their lives also have more time to perfect the skills and techniques and practice applying them to sport and life situations.

"Children who learn positive mental skills and healthy perspectives early have more time to apply them to living their lives and pursuing their goals (Orlick & Zitzelsberger, 1991, p. 336)."

Performance Enhancement

Children participate in sports for a variety of reasons including feelings of competence, affiliation, team aspects, fun, and competition (Weiss, 1993). Although developing self-confidence and positive feelings about self are important issues in competitive sports for young athletes, children who are involved in competitive sports compete with athletes their own age. Coaches, parents, and others involved in youth sport strive to assist young athletes to consistently improve their performance. Therefore, increasing performance levels is often another goal of teaching mental skills to young athletes. Li-Wei, Qi-Wei, Orlick & Zitzelsberger (1992) conducted research with 21 male and 19 female table tennis players aged 7-10 for the purpose of understanding the potential performance benefits of mental imagery training. This is one of the few sport

domain studies conducted with young children in an effort to teach a mental skill. The participants were assigned equally to 1 of 3 conditions: (1) an imagery training program; (2) video observation; or (3) no special training. The relaxed imagery training program consisted of relaxation training, video observation of a world class player, and repetition of a mental image of several skills used by the table tennis player on videotape. The video observation group watched the same world class player but did not participate in relaxation training or imagery repetition.

The performance accuracy and technical quality of the forehand attack and backhand attack to both under and overspun balls were evaluated pre and post program. The only group to show significant results on all four measures was the complete mental imagery training group. The authors concluded that relaxed imagery training can be taught to young children 7-10 years old and that the effects of relaxed imagery training are beneficial to skill performance. In this study, the young table tennis players in the imagery training group were not asked which specific components of the training were helpful. It was suggested that the players were able to form a perfect and stable image of the forehand and backhand attacks. The authors state:

"We feel that the use of mental imagery, and mental training in general, may be particularly promising for children; it offers a means of learning skills faster and more easily, as well as an opportunity to learn mental skills at an early age that can give children greater control over their personal destiny (Li-Wei, et al, 1992, p.240)."

It has been suggested that children as young as 7 are able to perform visual and movement imagery. Results gathered by Isaac and Marks (1994) also indicated that significant increases in the vividness of visual imagery occur in males and females

between the ages of 8-11.

Developmentally Appropriate Mental Skills Training

There have been several studies involving mental skills within the educational setting (Solin, 1991; Angus, 1989; Miller & McCormick, 1991; Zaichkowsky & Zaichkowsky, 1984). Cox and Orlick (1995) investigated the implementation of a relaxation/stress control education program with 266 school children from 6 to 12 years. Children were taught basic relaxation activities and concepts about stress and relaxation. Activities included becoming aware of different muscles, tensing and relaxing those muscles, breathing, focusing, and imagery. During the program, children were encouraged to apply the activities to different stressful situations in their daily lives.

An important aspect of this study was that the researchers utilized an intervention program with activities designed specifically for children. It has been suggested that the mental skills of imagery, goal setting, relaxation, focusing, and refocusing that have been previously taught to older athletes can be taught to young athletes. Hellstedt (1987) taught mental skills to 12 year old alpine skiers; however, the activities used to present the mental skills to the 12 year old athletes were the same as those for the 18 year old athletes. Younger athletes are at different biological, physical, social, and psychological levels of development all of which should be considered when developing strategies to enhance the psychological development of these athletes (Weiss, 1991).

"We have found that many of the approaches we use with high performance athletes are relevant for children in sport, as long as the strategies and perspectives are explained, adapted, simplified, and presented in terms children understand" (Orlick & McCaffrey, 1991, p. 326).

Researchers have suggested that the activities and exercises be fun and enjoyable and able to be understood by the children for which they are being developed (Orlick, 1996; Orlick & Zitzelsberger, 1996; Orlick & McCaffrey, 1991; Weiss, 1991). A few specific guidelines have been suggested to assist in the construction of developmentally appropriate activities to enforce the important concepts of mental skills: (1) the use of simple, concrete strategies to explain select mental skills to young athletes (Orlick and Zitzelsberger, 1996); (2) simplifying the instructions as well as the content of imagery and relaxation drills, for example, can maximize the athletes' enjoyment and comprehension (Orlick & McCaffrey, 1991); (3) communicating with language that is meaningful and captivates the children's attention. Relaxation and imagery exercises are more effective when the children understand their roles and have a clear picture of what to imagine; and (4) strong, vivid, and specific images will help the young athletes to imagine successfully (Weiss, 1991). Johnson and Kottmann (1992) offered a series of developmental considerations for children between the ages of 10 and 12 years. Stories, metaphors, and drawings are effective activities to help children between 10 and 12 to connect and understand difficult concepts. Children of this age group generally love to tell and read stories. Thought-provoking stories followed by discussions may serve to connect difficult concepts. Children who are 12 years old may have an increased ability, compared to younger children, for conceptual and abstract thought.

Developmental Considerations

The cognitive-behavioral approach to teaching mental skills encourages athletes to become aware of their thoughts and emotions while using positive behaviors that

enforce positive thoughts and emotions (Hogg, 1997b). Cox and Orlick (1995) stated that there are possibly several effects of the stress intervention program presented to young children in their investigation. "Relaxation and stress control skills can facilitate focusing, learning, performance, positive interaction, healthy lifestyles and balanced living, all of which are worthy educational objectives" (Cox & Orlick, 1995, p. 129). Children who learn stress management strategies to help deal with feelings and thoughts about stress may be able to control their thoughts and feelings in stressful situations (Davis, 1991).

However, it is believed that children first must become aware of just what thoughts and feelings they have. Therefore, stress management programs often include an awareness component (Hogg, 1997b; Cox & Orlick, 1996; Lowenstein, 1991; Lang & Stinson, 1991; Davis, 1991). This awareness component includes teaching children one or several of the following: how to identify tension, an understanding of the differences between tension and relaxation, an awareness of individual states of relaxation, and an understanding of the connections between the mind and the body (Edwards & Hoffmeier, 1991).

Middle childhood is considered to generally be between the ages of 7 and 11 (Harter, 1990; Stone & Lemanek, 1990). Before this age, children's awareness of who they are, or their self-concept, can extend to possessions, behaviors they engage in and things they enjoy doing (Stone & Lemanek, 1990). It is believed that before the age of 7, children's understanding of themselves is limited to what they can feel and see about themselves or their physical abilities (Damon & Hart, 1982). Young children believe that inner feelings and physical actions are consistently the same.

"...we know that the self is often defined physically at early ages, and the psychological self-notions emerge toward the end of childhood (Damon & Hart, 1982, p. 854)."

A synonym for self-concept could be self-understanding, that is understanding of the characteristics that create the self. The development of self-concept involves forming a more accurate and complex picture of the self including physical, intellectual, and personality characteristics (Craig & Kermis, 1995). The development of 'selfhood' is described by Stone and Lemanek (1990) as an emerging understanding of the self as a unique individual with physical and mental dimensions. Understanding both physical and mental attributes may be required in order to learn and use mental skills such as self-awareness and goal-setting in sport settings. Engaging in effective goal-setting and self-awareness may take an awareness of the existence of both one's physical and one's mental attributes.

At the age of 10, children understand the concept that feelings and thoughts can but do not have to match body actions (Damon & Hart, 1982). Children in middle childhood understand that the many components of their selves can react to make them feel and act differently in a variety of situations. Self-description is an extension of the understanding of the self through the use of verbal communication. The description of the self includes words and traits that one uses to describe how one understands the self. Children in early childhood focus on physical attributes when they describe themselves. Missing at this age are descriptions of their traits or general characteristics. In the descriptions of the self, children in middle childhood introduce trait labels that reflect their new found ability to classify specific attributes into categories. These categories are

increasingly more complex generalizations that younger children were not able to master (Stone & Lemanek, 1990). For example, children who are accomplished at different sports will not describe themselves as good swimmers and good runners but as good athletes (Harter, 1988). With respect to mental skills training program, children under the age of 12 may not have an abundance of experience reflecting on or discussing their mental attributes.

The concept of self-esteem includes an evaluation component. Young children in early childhood, evaluate their self-concept by the completion of physical skills and the feedback they receive from significant adults about those skills (Horn & Hasbrook, 1987). It is suggested that children begin to compare themselves to their peers in middle childhood. There is also evidence that young children are able to compare themselves to others in the physical domain before they are able to compare mental or personality traits (Ruble, 1980). Children engaged in peer evaluation more frequently and more realistically starting at 7 years of age (Horn & Weiss, 1991). Horn and Weiss (1991) suggest that children who are able to realistically compare their mental and physical skills with others are more psychologically ready for organized sport and competition.

Metacognition can be defined as thinking about thinking (Flavell, 1980). Metacognitive strategies are activities that test how well an individual has mastered some kind of material or knowledge. It is suggested that there are psychological developments which need to occur before one can indulge in metacognitive strategies (Flavell, 1980). Individuals should have a sense of themselves as an active and dynamic, cognitive agent. An awareness of our own thinking comes from the knowledge of the distinction between

the physical and the psychological self. In thinking about his/her thoughts, an individual reflects on actions in the present and relates them to past and future actions. Flavell (1980) believes that metacognition develops as a result of an increase in planfulness, the ability to be introspective, and by gaining insights into the inner self. Fogarty (1994) agrees that metacognition involves planning, monitoring, and evaluation of thoughts. Parents can help children by calling attention to relations among actions and thoughts and by encouraging children to think about past actions and possible future actions (Flavell, 1980).

Mental skills, that involve a cognitive approach, encourage athletes to think about their thoughts that occur in practice and competitive settings. A cognitive-behavioral approach to teaching mental skills to young athletes also involves developing a behavioral routine for future sport settings that takes into account past behaviors (Beauchamp, et al, 1996). Mental skills for sport is related to metacognition in that both involve planning, monitoring, evaluation, and thinking about thoughts and actions that have happened in the past and those that may happen in the future. Therefore, the developmental issues discussed above may have an impact on the effectiveness of a mental skills training program for athletes in early or middle childhood.

Methods and Procedure

Participants

Group A. The first group of participants in this study consisted of 6 females and 1 male (n=7) competitive swimmer, who ranged in age from 10 to 12 years (M=11.4). The young swimmers had been involved in competitive swimming for an average of 3.2

years. Four swimmers, 3 females and 1 male, ranging in age from 13 to 14 were also included in the mental training sessions. One other older swimmer, aged 14, declined to participate in the program. This swimmer felt the program was 'too young' for him. The level of competitive ability of the swimmers ranged from finishing in the top three at the provincial level in their respective age group to competing at the lowest club level as an extra-curricular activity.

Group B. The second group of participants consisted of 4 females and 2 male ($n=6$) competitive swimmers, who ranged in age from 9 to 12 years ($M=11.0$). The young swimmers had been involved in competitive swimming for an average of 3.0 years. Also included in the mental training sessions were three swimmers, 2 females and 1 male, aged 13. Three other older swimmers, ranging in age from 13 to 14, declined to participate in the program. Reasons for not participating included injuries, feeling too old for the program, and lack of interest in the sport in general. The level of competitive ability of the swimmers again ranged from finishing in the top three at the provincial level in their respective age group to competing at the lowest club level as an extra-curricular activity.

Procedure

Group Selection

This study was conducted with two different groups of competitive swimmers under the age of 12 years who were participating in a local age-group competitive swimming club. The appropriate groups for this investigation were identified by the head coach of the swim club. Group selection was only limited by the age requirements for this study. The two groups selected for this study practised at different swimming pools

within the city. At this club, swimmers were placed in groups according to the swimmers' proximity to the pool and their level of ability.

Not all of the swimmers in the two groups selected for this study were 12 years and under. As coach support was necessary for successful program implementation, the head coach chose groups within the swim club that he felt he would like to see involved in a mental skills program but also those in which the majority of the swimmers were within the age-group guideline. Therefore, swimmers ranging in age from 13 to 14 in the swim group were invited to join the training sessions if they wished. However, data and findings will only be reported for those swimmers in the two groups who were 12 years and under.

Before the mental skill program began, both of the group coaches were contacted to discuss the procedures and content of the program. The head coach and the two group coaches were found to be very supportive of the proposed program. It was necessary to use part of the rented pool time (15 minutes) to complete each of the mental training sessions. Although costly, each of the coaches believed the program was worth this missed physical practice time. The mental skills training program sessions with group A were completed before sessions began with group B. Informed consent was given by the parents/guardians (Appendix A) as well as by the participants (Appendix B). The first session of the program was dedicated to providing information to the participants about the program, as well as about anonymity and confidentiality. Letters to parents/guardians were sent home with the swimmers and consent forms signed by parents/guardians were returned at the next session. The swimmers in both groups who continued with the

program following the first week remained for the duration of the program.

Mental Skills Workbook

The mental skills program used in this study with young swimmers followed the approach presented in the text, Mental Skills for Young Athletes: A mental skills workbook for athletes 12 years and under (Hogg, 1997a). Each chapter begins with a story which highlights and explains the important concepts relating to a mental skill or to one of the other performance factors presented in the text. A storyline continues throughout the text beginning in the introductory chapter. This storyline involves many animals who are each involved in their own sport and who possess different characteristics related to dealing with competition and achieving their best athletic performance. For example, Odel Otter is a long-time competitive swimmer who is self-reflective and writes in her journal consistently.

Each of the chapters follow a similar framework. Following the story, several of the animals provide tips or explanations of the important concepts related to the specific mental skill. Readers of the text are presented with a choice of 10 activities or written exercises designed to reinforce concepts and to encourage the implementation of the mental skill into practice and competitive settings. The first exercise in each chapter encourages the athletes to understand the more difficult words and the words related to the mental skill that can be found in the story. The complexity of each exercise increases within the chapter with the last two exercises focusing on ways to use the mental skill in practice and competition. Guidelines for improving the mental skill are presented at the end of the chapter by an animal character. Finally, the athletes are encouraged to write a

few words on an activity or a strategy from the chapter that they will use in the future.

Mental Skills Training Sessions

Much of the information and exercises within the workbook were presented in a series of group sessions. The topics discussed in the group sessions followed the first eight chapters of Mental Skills for Young Athletes (Hogg, 1997a). These were: the importance of mental skills training, the skill of awareness, the skill of goal-setting, the skill of relaxation and energizing, the skill of positive and productive self-talk, the skill of creative imagery, the skill of attentional control and the skill of creating and maintaining ideal performance states.

Each of the group sessions were 30 minutes in length. A total of 18 sessions were conducted with each of the two groups of swimmers. The group sessions for both groups included the same content and followed the same general outline. Feedback from the first group was used to assist the researchers in improving the delivery of the content but did not influence the content of the program. The general session outline and the specific session content for each mental skill are described below.

General Session Outline

Each of the six foundational mental skills and the skill of creating and maintaining an ideal mental state were taught in a series of two sessions. In the first session, the researcher and/or the athletes read passages from the story located at the beginning of each chapter. From this story, the researcher highlighted several important words and concepts related to the specific mental skill and they were discussed within the group. Following this discussion, the researcher introduced several exercises from the text. An

individual or the group were encouraged to provide information in an attempt to complete the exercises. The researcher and the athletes provided feedback to the variety of answers given during each of the group discussions. At the end of the first session, the researcher suggested to the athletes to complete, on their own, one or two other exercises from the text that reinforced the mental skill that was discussed.

At the beginning of the second session, the words, concepts, and exercises discussed in the first session were reviewed. Athletes were encouraged to discuss their thoughts on the previous session and on the mental skill in general. Once again the athletes were encouraged to complete and discuss one or two of the exercises from the text. At the end of the second session, each of the athletes were asked to complete a questionnaire based on the information covered in the text and in the two sessions.

Design

Qualitative Methods

A number of procedures or checks to establish the trustworthiness of the findings of this study were utilized. Trustworthiness refers to the methods an investigator uses to persuade others that the findings of the study are worthwhile (Lincoln & Guba, 1985). The credibility of the findings were strengthened through prolonged engagement, persistent observation, triangulation and peer debriefing. The investigator led the eighteen mental training sessions for both groups at the swimming pools, remained at the pools for the physical practice time and attended several of the swimming meets throughout the duration of both mental skills programs. Therefore, the investigator was engaged with the participants for a significant period of time including observing them in

a variety of settings.

Triangulation refers to the use of different methods comparing findings to ensure the credibility of these findings (Lincoln & Guba, 1985). The use of interviews, specific mental skills questionnaires, the investigator's log as well as coach and parent questionnaires allowed pieces of data from one source to be compared with data from another source. At the beginning of the interview, participants were asked to comment on or elaborate on any of their responses on the specific mental skills questionnaire. The process of member checking was also introduced through the rephrasing of the participants' comments by the interviewers. The interviews were conducted by the principal investigator as well as a peer graduate student who was conducting a separate qualitative study as fulfillment of her Master's degree.

"Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter" (Denzin & Lincoln, 1994, p. 2). The qualitative methods used in this type of research allows the investigator to evaluate certain issues in depth and detail (Patton, 1990). "The goal is to obtain rich, in-depth, and detailed information from an "insider's" view - one that stresses the perspective of the participant (subject) and strives to understand the context or situation in which the experience takes place" (Gould et al, 1990, p. 256). This study was designed to be descriptive and exploratory in regards to a mental skills training program for young athletes. It was believed that the process of implementing a mental skills training program could be better understood through the use of qualitative research methods rather than quantitative methods. Patton (1990) suggested that the purpose of applied research and evaluation is to "inform action,

enhance decision making and apply knowledge to solve human and societal problems" (p.

11). The goal of this study was to be descriptive and in-depth with specific questions to encourage feedback from the athletes regarding the program content and their use of the mental skills.

"Applied evaluative research is judged by its usefulness in making human actions and interventions more effective and by its practical utility to decision makers, policy makers and others who have a stake in efforts to improve the world" (Patton, 1990, p. 12).

Qualitative research is conducted in a natural setting in which an investigator spends a considerable amount of time with the participants of the study (Bogdan & Biklen, 1992).

Although the mental skills training program was introduced to the participants and not naturally occurring, it was introduced at swimming pools to athletes involved in dynamic environments with coaches, parents, and peers. The investigator interacted with the participants in this study twice a week for several weeks. Credibility of the data can be enhanced through prolonged engagement and persistent observation (Hardy, Jones & Gould, 1996). Due to the limited research, it was felt that a detailed description of the process of implementing a program was important and required. The use of detailed or thick description of the process and perspectives of the participants strengthens the transferability of the findings (Hardy, Jones & Gould, 1996). The purpose of this study was to gain a better understanding of how young athletes understand the concepts of the mental skills and how they use the skills in their daily lives such that information and more knowledge could be passed to those implementing similar programs.

As stated above, qualitative research involves the development of an understanding

of the participants perspectives in natural settings. Conversely, quantitative research involves the collection of objective numerical data in an effort to obtain causal relationships between variables (Hardy, Jones & Gould, 1996). Quantitative researchers follow assumptions that data collected is independent of the researchers and free of the values of the researchers (Denzin & Lincoln, 1994). Neither quantitative nor qualitative research is deemed to be the more appropriate form of study. The type of research methods used often depends on the nature of the study and the philosophy of the researcher. Both qualitative and quantitative methods of research have strengths and limitations. Patton (1990) stated that an important aspect of research design is choosing qualitative or quantitative methods wisely. Qualitative and quantitative methods have been combined (1) to develop a quantitative instrument, (2) to help explain quantitative findings, (3) to supplement a qualitative study, and (4) to complement qualitative findings equally (Hardy, Jones & Gould, 1996).

It has been suggested that the use of qualitative research, involving participant observation and interviews, in the area of sport psychology has increased over the last five years (Hardy, Jones & Gould, 1996; Cote, Salmela, Baria & Russell, 1993). However, few studies have used interviews or other qualitative research methods to tease out the perspectives of young athletes on the area of mental skills used in a sport setting. "[However], I have found that children's perceptions as conveyed through their own words and actions are just as important as the empirical research for understanding participation behavior" (Weiss, 1991, p.337). Gould et al. (1993) interviewed four young athletes, ages 11 to 16, concerning their levels of stress and the levels of stress

experienced by their peers. The researchers wished to provide an in-depth, personal view of psychological stress from the athletes' perspective. The authors stated that the interview was an excellent method for better understanding stress experienced by young athletes.

"As sport scientists, we conduct our research in an adult world and discuss what young athletes like, feel, and hope to accomplish in sport. In doing this, we sometimes forget that the young athletes themselves are an excellent source of knowledge in their own right (Gould et al, 1993, p. 296)."

Instrumentation

A semi-structured interview schedule was developed to collect data regarding the athletes' interest and enjoyment of the text and the mental skills training sessions. Questions also focused on the knowledge of each of the mental skills in the text and the use of the mental skills (see Appendix C). This interview was conducted following the completion of the mental skills program by this investigator and another graduate student involved in qualitative research. The graduate student had been present at each of the mental skills training sessions. This procedure was introduced in this study to enhance the dependability of the findings (Hardy, Jones & Gould, 1996).

A questionnaire, "My feelings on the skill of", was developed to evaluate each athlete's knowledge and use of each mental skill and to be used as adequate manipulation check (see Appendices D-J). These questionnaires were administered following the completion of the two sessions focusing on a mental skill. The individual mental skills questionnaires were developed and changed throughout the implementation of the program for group A. It was felt that in the beginning of the program, the swimmers

were not responding to several of the questions because they did not understand the wording of the question. It was decided that the question asking swimmers to describe their plan to use the specific skill would be changed to ask them to list 2 specific things they would do to develop the specific skills. The increase in the response following the change in the wording could have been a result of which skill was being evaluated. However, it was believed that the wording of the questions became simpler and clearer.

For each of the individual mental skills, the swimmers were asked to indicate their enjoyment of the exercises by circling one of the faces in a set of three: a smiling face, a neutral face and an unhappy face. They were also asked a series of open-ended questions focusing on things they learned in the sessions and from the workbook as well as their future use of the skills and when and how they would use the mental skills.

Parent and coach's questionnaires were developed to evaluate their perspectives on the text and sessions and their perspectives on the athletes' participation in the mental skills training program (see Appendix K-L). The parent and coach's questionnaires were administered following the athletes' completion of the mental skills training program. The parental questionnaires were based on information provided by Cox and Orlick (1995) in their study evaluating students' use of stress control strategies.

Fontana and Frey (1994) stated that interviews can take several forms including face to face structured, unstructured or semi-structured interviews, questionnaires and telephone surveys. The dependability of research findings can also be strengthened through the use of several methods of data collection (Hardy, Jones & Gould, 1996). Face to face interviews can be used as the primary data collection procedure or used with

participant observations and other methods (Bogdan & Biklen, 1992). Semi-structured, face to face interviews provide a structure or a framework of questions that may result in collecting comparable data across subjects without rigidly controlling the content of the interview. It has been suggested that observations in the 'field' are a form of unstructured interviewing that could even involve answering participants questions or discussing personal opinions (Fontana & Frey, 1994). During the implementation of the program, the investigator kept a log of the information and discussion topics the participants engaged in during the sessions. Through this type of unstructured interview this researcher was able to include data regarding questions asked and discussed during the training sessions.

Data Analysis

It has been suggested that the process of evaluative inquires using qualitative methods involves careful data collection and thoughtful analysis (Patton, 1990). In this study, each of the interviews were conducted at the swimming pool and were audio tape recorded. The interview time ranged from 25 minutes to 1 hour. These interviews were then transcribed and read several times. As suggested by Creswell (1994), the investigator produced a list of topics emerging from the interview transcripts. These topics were abbreviated as much as possible to reduce the topics which were repetitious or redundant. Words, phrases or paragraphs which were the most descriptive relating to each of the topics were identified from the transcripts. These topics and the descriptive wording was then grouped into larger categories to reduce the data into practical sections for analysis. In this study, the questions included in the interview served to narrow the

possible topics for discussion. However, several other topics emerged around the structured questions.

The open-ended questions on the skills, parent and coach's questionnaires were reduced and analysed in the same fashion as the interviews. Answers to the closed-ended questions (Yes/No) were tallied. These numbers and percentages will be included in the narrative of the interview and questionnaire analysis. In this narrative, the use of long and short quotes will be varied and they will be intertwined with this investigators' interpretations. The participant observations that were recorded in the investigators' log will be used to describe in detail each of the mental skills training sessions. "Analysis involves working with data, organizing them, breaking them into manageable units, synthesizing them, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (Bogdan & Biklen, 1992, p. 153).

Mental Skills Training Program

This process of implementing a mental skills training program with young athletes 12 years of age and under was intended to provide information and guidelines for future implementations of similar programs with other young athletes. As part of the data collection, an investigator's log was kept during the implementation of the mental skills training program. The following section describes, in detail, each of the mental skills training sessions. It was believed that a summary of the mental skills training sessions would add to the description of the swimmers' experience with the mental skills training program as well as to include their feedback concerning the program. Included are the passages from the text, highlighted words and concepts, exercises, and group discussions

for each of the mental skills in the training program. Many of the swimmers participated in the group discussions during each session. The young athletes' observations and suggestions that were made known during the sessions are also included in the description below. Both groups of swimmer will be included in the following discussion of the training sessions as each group was exposed to the same concepts and exercises.

Importance of Mental Skills Training. The first two sessions focused on the importance of mental skills training. The swimmers were interested in the information in this chapter. One of the swimmers remarked that she had known how to describe each of the mental skills but had not known the names of the skills. It seemed that most of the swimmers knew what the mental

skills were and the groups were able to suggest definitions of the skills without hesitation; thereby, completing exercise 7 (see Table 1). Both groups of swimmers were interested in reading the passages themselves rather than listening as the investigator read the text. The words technical, physical, strategy,

and mental were discussed to introduce several of the different important aspects of performance. The swimmers were interested in learning the mental skills and did not express any negative feelings about the exercises. After I remarked that I hoped the

Table 1 The Importance of Mental Skills Training Sessions

Session 1

Read: p. 1 first paragraph

p. 3 middle paragraph

Words; technical, physical, strategy, mental skills

Ollie Owl's Wheel of Excellence

Session 2

Exercise #3 - 'Me as a person - me as an athlete'

Exercise #6 - 'Fiona's One-Legged Exercise'

Exercise #7 - 'The 6 Mental Skills' Questionnaire

swimmers would learn and have fun with the program, several of the swimmers stated that they thought they would.

The Skill of Self-Awareness. During the first discussion on the skill of self-awareness, the groups read the definitions to a variety of 'self' words included in the text (see Table 2). Exercise 2 was well received by the swimmers in both of the groups. They enjoyed identifying a word which described themselves beginning with each letter of the alphabet. In both groups, the swimmers were more likely to identify words to describe their physical attributes than their mental attributes. This investigator cued or prompted the swimmers to cite words to describe their mental attributes. With these prompts, the swimmers were able to identify attributes such as confidence and determination. Exercise 6 asked the athletes to identify important physical and mental skills that they felt they needed to develop. It was easier for the swimmers to list 3 physical skills than 3 mental skills. Once again, the swimmers needed less prompting to list physical skills. The swimmers discussed their sport experiences as part of exercise 7. This exercise asked the athletes to identify thoughts, feelings and behaviors that help them to feel confident. The majority of both groups participated in the group discussion about this exercise. The swimmers discussed

Table 2 The Skill of Self-Awareness Training Sessions

Session 1

Read: p. 13 to 14 second paragraph

Definitions: p. 18 self-awareness, self-image, self-esteem, self-acceptance, self-confidence, self-actualization

Exercise #2 - 'Things about me'

Exercise #6 - 'Important physical and mental skills'

Session 2

Exercise #7 - 'Increasing my feelings of self-confidence'

Exercise #9 - 'My journal'

Exercise #10 - 'My parents/coaches/teammates see me as'

Questionnaire

real-life experiences like talking to their coach and friends as actions that help them to feel confident. This investigator introduced exercise 9, which made suggestions for keeping a journal. Several of the swimmers indicated that they already kept a training log or a diary. Exercise 10, which focused on identifying special characteristics that a coach, parent or peer might see, was suggested as a homework assignment to be completed in private. During these first sessions, the investigator highlighted the quotes at the bottom of each page in the text. Swimmers were able to identify favourite or confusing quotes at this point. It seemed as though some of the swimmers skipped ahead to read the quotes as they were able to discuss quotes from later chapters. It was also at this point that the investigator highlighted the final exercise in each chapter which was to identify 'a bright idea' each swimmer had about the information or exercises from the chapter.

The Skill of Goal-Setting. The sessions focusing on the skill of goal setting started with reading from the text and discussing concepts such as long term, short term, process, and outcome goals. During the discussions among both groups, swimmers shared the reasons why they participate in competitive swimming (exercise 3, see Table 3). One swimmer articulated that

**Table 3 The Skill of Goal-Setting
Training Sessions**

Session 1

Read p. 29 second paragraph

p. 31 second paragraph

Words: realistic, motivate, trophies, rewards, positive, self-confident, long term, short term, performance goals, outcome goals, winning

Exercise #3 - 'My Motivational Forces'

Exercise #5 - 'My Dreams'

Session 2

Exercise #9 - 'Stepping Stones'

Exercise #10 - 'My Accomplishments'

Questionnaire

often parents can act as motivators at the beginning of a swimming season and that they are external motivators. Other motivators that were discussed included keeping fit, being with friends, traveling to swim meets and having fun. A difference between the two groups emerged in the area of defining dream goals and long term goals. The first group of swimmers indicated that for some swimmers in the group the Olympic Games was a long term goal rather than a dream goal. A long term goal was defined by the investigator as a goal that could be accomplished in the next two or three seasons. The swimmers were adamant that two specific swimmers in their group could reach the Olympic team in the next three years. The second group discussed dream goals both as a person and as an athlete. Swimmers spoke of their career dreams including speech pathology and acting as well as swimming dreams such as the Olympic Games Team and the Canada Games Team. Both groups became actively involved in exercise 9, which asks the athletes to identify short term goals or stepping stones which lead to a long term goal. This exercise helped the athletes to visualize how accomplishing short term goals can help them to accomplish a long term goal. The swimmers stated that this was an effective exercise. Exercise 10 asked the athletes to indicate an accomplishment they were proud of and to recall how this achievement made them feel. The investigator encouraged the athletes to do this exercise in private; however, feelings of pride and confidence were discussed before the questionnaire was distributed at the end of the session.

The Skill of Relaxation and Energizing. The swimmers enjoyed reading the passages from the text so this was continued for the first session of each mental skill.

The next two sessions focused on the skill of relaxation and energizing. Exercise 2, in which the swimmers were asked to 'park' their worries in a garbage bag, was a successful exercise (see Table 4). While group A enjoyed the exercise, group B related to this exercise and asked this investigator to include this exercise at the beginning of all the subsequent sessions. Each swimmer

contributed to the exercise by adding a worry. These worries or frustrations focused on school, peers and siblings. The investigator would draw a bag on the dry-erase board, write each worry in the bag and then erase the bag when everyone had contributed. Exercises 3, 4 and 5 asked the swimmers to practice deep, rhythmic and ratio breathing. The swimmers were aware of deep breathing but the other types of breathing were new and interesting to them. At the

beginning of the progressive relaxation script, a few of the swimmers were giggling and squirming. However, as the script progressed, they settled down, listened and participated. The first session on the skill of relaxation and energizing ended with an energizing exercise. It seemed that group A related to the energizing exercise more than group B. Exercise 9, or the energizing exercise, asked the swimmers to shake or move

Table 4 The Skill of Relaxation and Energizing Training Sessions

Session 1

Read: p. 47

p. 48 second paragraph

Words: deep breath, calm, energize, nervousness, butterflies, internal pressure, external pressure, alert, progressive relaxation

Exercise #2 - 'Parking Exercise'

Exercises #3, #4, #5 - 'Controlled Breathing'

Exercise #6 - 'Progressive Relaxation Script'

Exercise #9 - 'Energizing Exercise'

Session 2

Exercise #7 - 'How to change or control nervous feelings'

Exercise #8 - 'Tension Releasers'

Questionnaires

each arm and leg in the way the children's song 'The Hokey-Pokey' asks children to 'put in' each arm and leg and 'shake it all about'. Group A recognized the similarities and spontaneously started to sing the song and perform the actions. The swimmers seemed to enjoy this exercise and have fun.

Exercise 7, which asked the swimmers to identify things that make them nervous before and during competition, was discussed during the second session on the skill of relaxation and energizing. Swimmers in both groups listed parents, coaches, spectators, swimming in a fast heat, worrying about being disqualified and worrying about doing well as things that made them nervous. Swimmers in both groups were also open to discussing their thoughts and feelings and how their body feels when they are nervous in competitive situations. However, both groups were not able to articulate ways in which they would take control of their thoughts, feelings and actions when they were nervous. The investigator suggested the exercises previously introduced in the chapter such as deep breathing, progressive relaxation and energizing. The swimmers then suggested things like talking to their coach and cheering on their teammates. It seemed that the swimmers were able to talk about what they should try to feel (confident, relaxed) but were unable to list exercises or ways to develop those feelings. Without prompting from the investigator, the swimmers would have discussed the relaxation and energizing information without making the connection to applying the exercises to practice or competitive environments.

The Skill of Self-Talk. Swimmers in both groups expressed negative attitudes before the beginning of the first session on the skill of self-talk. It was clear that the swimmers

thought this skill was going to be hard to learn and the exercises would not be fun to discuss or to do. However, as the swimmers learned about cue words and how to use them in competition by discussing exercise 10 (see Table 5), they became interested in the skill of self-talk. Some of the swimmers felt that the way they talk to themselves or the things they say to themselves were beyond their control and not able to be changed. Two of the concepts discussed in the first session was that developing positive self-talk can help to establish a sense of control over negative thoughts and that positive self-talk may take time to develop if it seems unnatural at first. Exercise 10 asked the swimmers to identify cue words to suit each important segment of their race. The swimmers chose a race (100 metres freestyle) and brain

stormed different cue words to use at the start of the race, during each of the lengths, at the turns, and at the finish.

The investigator was required to suggest to the swimmers that cue words be short. As they begun the exercise, the swimmers tended to suggest sentences or phases describing the type of cue words they would use rather than the actual words or triggers. It seemed that the swimmers enjoyed this activity

and learned another way to think about the skill of self-talk. Self-talk became not only

Table 5 The Skill of Positive and Productive Self-Talk Training Sessions

Session 1

Read: p. 61

p. 62 second paragraph

Words; inner voices, negative, positive, cue words, thinking, plan, remind, written statements

Uses of Self-Talk p. 65

Exercise #10 - 'Cue Words'

Session 2

Exercise #3 - 'Aware of Negative Statements'

Exercise #4 - 'Reframe Negative Statements'

Exercise #6 - 'Affirmation Statements'

Questionnaires

speaking positively to themselves before competition but also became a form of reminders of the physical skills they needed to do during competition. The swimmers were also asked to discuss exercises 3 and 4 which focused on identifying negative statements they make to themselves and how to reframe those statements in a positive light. Both groups of swimmers again needed reminders that the exercise was not to describe the kinds of things they would say to themselves but to develop actual positive phrases and statements they could use in competition or practice.

The Skill of Creative Imagery. During the first session on the skill of imagery, several swimmers in both groups stated that they had experienced imagery exercises in the past. They expressed their desire to do an exercise that involved imagining their race while a partner timed them in order to compare their best time to the time it took to imagine their race. As a result of the swimmers' interest, the exercise was included in the second session on the skill of imagery although it was not included as an exercise in the text. The first two exercises (2 and 3, see Table 6) were introductory imagery exercises involving a character in the story and involving a sport venue (swimming pool). There were swimmers in both groups who expressed that they could feel or see Bernie

Table 6 The Skill of Creative Imagery Training Sessions

Session 1

Read: p. 75 second paragraph
p. 77 middle paragraph

Words: pictures, rehearse, movie, taste, feel, smell, control, see, hear, touch, vivid

Exercise #2 - 'Introductory Imagery Exercise'

Exercise #3 - 'Sport Venue Imagery'

Session 2

Imagining races and timing the image

Exercise #4 - 'Ricky Rat's Headlines'

Exercise #9 - 'Using imagery in practice'

Exercise #10 - 'Performance Imagery Creation'

Questionnaires

Bulldog clearly and others who giggled or were restless. The investigator discussed how individuals can use different perspectives in their imagery; they can see themselves and the setting or only the setting as they see things through their own eyes. The majority of the swimmers stated that they could see the character and the swimming pool through their own eyes. The investigator suggested completing exercise 4, which asked the swimmers to think of a newspaper report based on their sport performance.

At the beginning of the second session, the swimmers were encouraged to combine the skills of relaxation and imagery by breathing deeply or progressively relaxing before beginning the swimming race imagery exercise. Both groups enjoyed imagining their race while a partner timed their imagery. Swimmers were able to practice imagining their race several times and commented that they were closer to their best time on the second or third imagery of their race. The investigator led a discussion of where and when they could use this exercise and that to achieve a goal of imagining consistent and accurate races, swimmers should practice imagery over time. The sessions ended with a discussion of what the swimmers sensed during their swimming race imagery exercise (exercise 10). Swimmers discussed seeing other swimmers and their teammates on the pool deck, smelling the chlorine, feeling and tasting the water, hearing the cheers from the crowd, and feeling their tired muscles.

The Skill of Attentional Control. In the first session on the skill of attentional control, the swimmers discussed competitive situations in which their attention can be swayed from the task at hand and what causes this shift of attention. Common distractions (exercise 2, see Table 7) were identified as the performance of other

swimmers, people cheering, the officials on the pool deck, and, in relation to practice, that evening's required homework. The swimmers were concerned about how to switch their attention from something irrelevant

back to the competition. The groups

discussed the definitions of attention,

concentration, focus, and refocus.

Exercise 4 introduced a centering

exercise, which exposed the swimmers to

a basic exercise to assist them in focusing

or refocusing following a distraction. A

simple meditative technique (exercise 9)

was also introduced to assist swimmers

in focusing and clearing the mind of

distractions. The sessions on the skill of

attentional control ended with a

discussion of exercise 3. Both groups of swimmers were asked to make a list of the

things that can help them to get into a 'zone' of concentration. The investigator was

required to assist in the brainstorming session as the swimmers were not able to add to

the list. The meditation and centering exercises were suggested but once again the

swimmers found it difficult to articulate exercises that they can do to help them develop

the specific mental skill. However, one swimmer in group A stated that she could put her

distractions in a bag as was discussed in respect to relaxation and energizing.

**Table 7 The Skill of Attentional
Control Training Sessions**

Session 1

Read: p. 90 second paragraph

p. 91 middle paragraph

Words: focus, concentration, cues,
distraction, maintain

Definitions: p. 94

Exercise #2 - 'Identify common
distractions'

Exercise #4 - 'Centering Exercise to
focus'

Session 2

Exercise #3 - 'Get into the
concentration zone'

Exercise #9 - 'Simple Meditative
Technique'

Questionnaire

The Skill of Creating and Maintaining an Ideal Performance States. To

begin the sessions on creating and maintaining ideal performance states, the words ideal, performance and states were discussed (see Table 8). Both groups of swimmers were adamant that another word for ideal was perfect but that a completely perfect performance may not be impossible. In group A, the investigator suggested that although a perfect performance might not be attainable, young athletes can develop mental skills that help them to achieve the best

possible state of mind for practice and competition. One swimmer in the

second group was able to articulate this point and shared it with the other

swimmers in the group without prompting from the investigator. A

phrase from the text (prepared to perform perfectly) was also

introduced and discussed. Exercise 7 (mental warm up routine) introduced

the topic of routines and how to apply them in a competitive situation. The

exercise referred to a pre race strategy.

Both groups of swimmers discussed the things that they do or the things that they need before a swimming race. The swimmers mentioned their physical warmup, having their

Table 8 Creating and Maintaining Ideal Performance States Training Sessions

Session 1

Read: p. 104 middle paragraph
p. 106 middle paragraph

Words: ideal, performance, states,
physical resources, mental resources,
prepared to perform perfectly

Routine plan and content p. 108-109

Exercise #7 - 'Mental Warm-up
Routine'

Exercise #9 - 'Identifying
performance distracters'

Session 2

Constructing individual performance
plans

Questionnaire

goggles, speaking with their coach, and taking off their clothes and stretching. Each of the swimmers could articulate the physical things they do before their races. However, the initial pre-race routine discussion did not include mental skills or the exercises designed to assist the athletes to apply the mental skills before competition. The second session focused on providing an example of how to create an individual performance plan which incorporated the mental skills that were discussed during the program. Volunteers were chosen from each of the groups and the investigator listed or reminded the groups of the 6 foundational mental skills. The volunteer swimmers chose the skills they felt needed to be included in their routine and the exercises or specific components (eg: deep breathing, cue words, centering exercise, etc.) were identified. Both groups were vocal and assisted the volunteers in creating their routines. Swimmers who had not volunteered for the exercise began to discuss the skills and exercises they would include in their routines.

It became clear as the program progressed that both groups of swimmers were able to speak about the concepts and words relating to each of the mental skills with ease. There were several swimmers in both groups who were more vocal than the others during the group discussions and the completion of the exercises. However, the investigator encouraged all swimmers to participate by directing questions to each of the swimmers in both groups and inviting responses from all participants. Throughout the program, the swimmers found it difficult to articulate how to integrate the exercises taught in the mental skills sessions. The swimmers required prompts from the program leader to articulate which of the previously taught exercises could be applied to their practice and

competitive experiences. It was not until the last few sessions, which focused on an ideal performance state, that the swimmers were able to speak of specific mental skills and exercises they would use to help them control their thoughts, feelings and behaviors in their athletic environments.

Results

Data obtained from the competitive swimmers is presented in the following section.

In the interview data section, quotes from the swimmers in the first group (group A) will be indicated by a 'A' in the parentheses following the quote while the quotes from the second group (group B) will be indicated by a 'B'. The mental skills questionnaire data will be reported separately as the questionnaire format changed from group A to group B. The coach's and parent questionnaire data of both groups will be combined.

Interview data.

Mental skills training sessions.

1. Enjoyment. None of the young swimmers indicated that the mental skills training program was an aversive experience or that they would not like to be part of a similar program in the future. However, the young swimmers indicated that different parts of the program were slow and unengaging. For the most part, the swimmers reported that they enjoyed the sessions. The sessions that were reported to be boring or that dragged on were sessions in which few active exercises were included or those in which the swimmers showed little personal interest.

The sessions helped us to think about the mental skills. Not just someone saying 'Do it.' (female, 9, B)

Sometimes they were boring because all we would do was talk and we wouldn't do anything. (female, 12, A)

It was boring when we didn't really do anything we just talked about something. (female, 11, B)

Sometime it was sort of boring. Sometimes I liked it. Like it depends on what subjects that we did. Because I really like relaxation and goal-setting and energizing and there were some other ones. (female, 11, A)

Compared to group A, the swimmers in group B were very activated and vocal during the sessions. They often stumbled over each other to speak about the mental skill or exercise being discussed.

One reason it was boring sometimes was because everybody would talk at once. (female, 12, B)

2. Session Outline. Swimmers were encouraged to discuss the components of the sessions including the readings, group discussions of words from the text and the exercises. Positive and negative aspects of the session components were spoken of by the young swimmers.

Well, some of the words were a bit different, so I thought about them a bit more. (female, 12, B)

I liked the garbage bag exercise. And how we got up and were allowed to write on the board. (female, 11, B)

The swimmers indicated that they preferred the group discussions as they enjoyed the chance to talk and listen to others talk.

I like how we got to read sometimes and we participated in group discussions. (female, 11, A)

I liked the group discussions. I got to learn more things about my teammates. (female, 12, A)

*I liked the sessions because we were all in a group and we got to share our ideas.
(male, 12, B)*

*I think we should have had more group discussions. When you talked and wrote things on the board, I found that a little boring and that's why I was talking sometimes. I liked laying down and imagining stuff. I liked that a lot. When we imagined stuff when we were relaxing, like breathing in and breathing out.
(female, 11, A)*

Mental Skills Training Workbook

1. Overall Layout. The swimmers were encouraged to discuss their thoughts and ideas about the workbook. Overall, the swimmers reported that the workbook was helpful and interesting. They offered some advice to improve the overall layout of the workbook.

Don't change the self-talk and the imagery chapter. (female, 9, B)

I think the workbook was good I just didn't really like the [animal] characters but I thought it was well put together. (female, 12, B)

I do [think it was helpful] but I think that after a chapter it should have summarized the whole book so you didn't forget parts. (female, 12, A)

I like drawing. Maybe they can have more drawing exercises so that you can draw your feelings. (female, 11, B)

One negative aspect that many of the swimmers spoke about was the number of characters that were involved in each of the chapters. They felt that there was an over abundance of animal characters which made the stories confusing at times. Some of the swimmers indicated that the characters were too young for them.

I thought it was very good and very helpful. But I found the stories were a bit confusing because of all the characters. (female, 12, A)

They [stories] were good. You could tell that Ricky Rat and Sammy Snake were

very negative and everything. It was easy to relate to what the characters were saying not so much how they felt. They said Maria Mongoose was going to help Sammy Snake be more positive. Well, I knew that because sometimes I help people when they are feeling bad. Like some things made sense and some didn't. Like, if Bernie Bulldog was a really strong, tough guy if he was training and he said I chased cats and all this about being aggressive. It just didn't seem like something that a bulldog should do. Like throw a hammer or what ever. (female, 10, A)

But if you were younger you might like the characters better. (female, 12, B)

2. Specific exercises. Swimmers commented on the specific exercises that they enjoyed or the specific components of the workbook that they enjoyed.

Don't change the fact that you have the games and fun exercises spread out in there. And I like the poems...like the two poems...'I am special' and the other one. (female, 10, A)

The one [exercise] where we named all, like from A to Z, the things about you. I liked that one. (female, 12, A)

I liked the poems. They were neat. And the quotes. I don't like reading for very long because I got distracted but the other stuff was good. (female, 11, B)

Useful exercises were the breathing exercises and when we had a partner and they timed us imagining. (female, 9, B)

The cue words exercise was helpful. I used it at A's. (female, 11, B)

3. Future use of the workbook. Some of the swimmers indicated that they would go back and look at or do some of the exercises that they did not complete during the program.

I am keeping it [the workbook] ...so I can use...to try all those other skills that I didn't really get a chance to try. (male, 12, A)

I would go back to the exercises because the relaxation exercises helped me to relax. Some of the exercises didn't really help me but those did. (female, 11, B)

Others indicated specific times or situations in which they would use the workbook.

Sometime, I might want to remember some of the stuff on self-talk or goal-setting or relaxation because those relaxation things and energizing you could do anywhere So I might put that [workbook] in my swim bag and take it to meets and do those things before races or something. (female, 10, A)

I did about half of the workbook. I might go back in the new swimming year to look at the other half. It might help me to concentrate a bit more. I might go over the imagery again. (female, 12, B)

When you asked us to do the homework, I tried to do that but sometimes I forgot. But I might go back to the exercises because my breathing [hyperventilating] might start again. (female, 9, B)

Awareness of the mental skills.

One of the purposes of this study was to evaluate the awareness of the swimmers mental skills following the mental skills training program. The swimmers were able to discuss the mental skills learned during the sessions and their previous awareness of the mental skills.

1. Previous awareness. During the interview, the swimmers not only discussed the skills that they learned throughout the program but their awareness of the skills before the program began.

Before all my races I breathe deeply and try to calm down because I'm a little nervous. I knew about the breathing before this program. (female, 12, B)

Several of the swimmers indicated that they knew when they were saying negative things to themselves or behaving in ineffective ways but they were not certain what to do to correct their thoughts and actions.

Sometimes, when I was sad I got mad at myself. In my head, I would go 'I can't do anything right' and that is not good. (female, 11, A)

I had a lot of motivation but I didn't really know about any...well, I knew that you were supposed to relax and energize but I never really did it specifically. I would get myself going and I would sit and relax but I wouldn't really think of breathing or anything special. (female, 10, A)

The swimmers indicated that they or others had general knowledge of the mental skills but previously did not understand their importance or were aware of the specific activities that can be used to apply the mental skills.

I learned that swimming isn't all physical. Half of it is mental. Don't just concentrate on how good you are at swimming but the mental part, too. (female, 12, B)

Even if you told them [other swimmers] to do imagery before the race, they would still have to know exactly how to do it. (male, 12, B)

2. Personal Characteristics. Following the program, the swimmers were also aware of which skills were important for them to learn or to use because of their own personal characteristics.

I need some of those skills. Like relaxation skills and the positive skills because I am a very pessimistic person. I did a lot more positive thinking about myself after we did the self-awareness. (male, 12, A)

I get confused when I try to start to self-talk. It's really hard for me. Cue words are things like when I say "100 left" or "50 left". But I think self-talk is like "You are going to do well", "Calm down" and it still gets me confused. (female, 11, A)

For me the most important mental skills are relaxation and self-talk. Those are the ones I do well. The ones that I need to become better at are self-awareness and goal-setting. (female, 11, B)

3. Awareness following the program. The swimmers were also able to discuss the mental skills that they were made aware of and are now using as a result of participating in the mental skills training program. They were able to name the mental

skills as well as the specific exercises that they now do to incorporate the skills into their competitive settings.

Well, I have learned more about goal-setting on how to make my goals. If they are realistic and dream goals. I have learned self-talk to keep me going. (female, 10, A)

I did that before [imagery] but I got more tuned to it. I got more adjusted to it. (male, 12, A)

I do the kinds of breathing, deep and the others that we learned about in the chapter. I do word or self-talk exercises, too. (female, 11, B)

Relaxation and energizing. And goal setting. I need to relax myself because I get all nervous and I need to imagine what my race is going to be like so I can get prepared for it. I need to have a goal so I can reward myself. (female, 12, A)

Now, I know I can be more relaxed for my race and I know how to relax. And when I was doing the energizing thing like the 'hokey-pokey', it got me really energized for my race. I was more aware of it, more ready. (female, 12, A)

The self-awareness exercises got you to put all your qualities together. (male, 12, B)

Important skills are imagery, self-talk and self-awareness. But the most important for me is imagery. It is something that works for me and something that I need to work at. (female, 9, B)

I am now aware of myself and the things that I can do. (female, 11, B)

Awareness of how and when to use the skills.

A purpose of this study was to evaluate the swimmers knowledge of how to use the mental skills and when to use them following the mental skills training program. The swimmers were able to identify specific instances when they would use the skills and were also able to identify specific ways that they would incorporate the mental skills at these specific instances

1. When to use the mental skills. The swimmers spoke of swimming situations in which they could use the mental skills.

You could use them [the mental skills] when you are feeling down. And before a race and maybe even after a race if you get a bad time. (female, 12, A)

I don't really use it [the mental skills of relaxation and imagery] before and after the season. Sometimes I do use it when I am lying in bed. When I am trying to get to sleep sometimes I think of my races. Like how I will do the next day if it is before the meet or...I imagine myself swimming. And then looking up and getting a great time. (female, 11, A)

The best times to use the mental skills are right before a race and during a race. (male, 12, B)

You can use them when you are frustrated. You can go back to the exercises and go over them, do them. Let's say you have had a bad race. Maybe it was because you were cutting yourself down or something. Or you were setting your goals too low. (female, 11, B)

However, they indicated that the mental skills were not only to be used at the swimming pool but during their daily lives in school and at home as well as in other competitive settings.

At school, you have a goal to get your best mark. Say you are frustrated in something, you have to relax and be aware of what you are doing. (female, 12, A)

I think it [mental skills training] is important because it doesn't only apply to swimming it applies to real life. (female, 12, A)

I could use it during the warmups of my hockey game. (male, 12, B)

2. How to use the mental skills. The swimmers were able to speak of specific ways in which they would use the skills or how others could use the skills.

For cue words, when I am in the water I can say "Go fast", "Have a good turn", "Keep up" and "Don't concentrate on people beside you" and stuff. (female, 11, A)

I know that you need to relax and get ready for my swim. Then right before you get on the blocks you stretch out and get your shoes off and get energized.
(female, 11, A)

One of my friends at swimming gets really down on herself after a race and we swim in the same age group. Sometimes I come first and she is second by only this much. She gets really upset and likes to throw things around and stuff. If she knew about self-awareness, she could learn about what is good about herself and not think about what I am better at or what I am sometimes better at. (female, 10, A)

I use energizing and imagery to psych myself up before a race and to get it all planned out. (male, 12, B)

I practiced a bit of imagery. I pictured myself in the water and what time I wanted. I did that at the meet. I talked to myself to get ready for my swim. I was saying encouraging words like, "You can do this". (female, 12, B)

Before my race, I usually freak out all the time but I didn't know what to do. I would say, "Oh, it doesn't matter, I will be okay." That is all I would think. But now I know that I can relax and I can do some imagery. Taking deep breaths really helps me, too. And I do that imagery that we did when we were laying down. I think that was good. (female, 11, A)

Actual use of the mental skills.

Another purpose of this study was to evaluate the swimmers' actual use of the mental skills following the program. The swimmers were able to provide specific instances in which they had applied the mental skills in competitive, practice and in other settings. Some of the swimmers shared their perspective on the effects of applying the mental skills in competition or outside the competitive setting.

1. Use in competition. The swimmers shared some instances in which they applied the mental skills since the program began.

I wanted to get my 'A' time so bad. I wanted to do so good and I was so nervous because of that but I was also really positive. I said "I'm going to do good, I'm going to do good." And I did. When I did my 200 free at B's, I went "I'm going

to do good, I'm going to do good." And I got swimmer of the meet, too. I got really close to my A's. I was like "Cool, I am happy with it." (male, 12, A)

At EK1, I timed myself before the race doing the imagery and I was only .2 of a second off my time. It helped me because it made me confident that I could do it. I was more confident going into the race. (male, 12, B)

Before my 200 Fly at A's (I was in the finals in lane 8) I was nervous. I was trying not to breathe really hard and to do some of the breathing exercises because I wanted to finish the race without choking on the water. (female, 9, B)

At A's, I said before I went up to the blocks that I was going to say "Spring!", "Kick!", "Fast turns!", "Stroke long!", stuff like that. (female, 11, B)

2. Use in practice. During the program, the use of the mental skills in practice was discussed. A swimmer in group A indicated that she had used the skills in this setting.

I was doing a kick set. I said, "All that matters is my own time" and I did a better time. Self-talk helped me out. (female, 12, A)

3. Outside the swimming setting. The swimmers were aware that they were able to apply the mental skills outside of the swimming setting. Other settings included school and home.

If I get really upset or really mad, I take deep breaths to calm down. (female, 12, A)

When I get home after school, I make a little plan and that is my goal for the night. If I don't finish it all, I have to do it the next day in the morning. (female, 12, A)

My parents got divorced and my dad is not a very nice person. So to calm myself down, if he hurts my feelings, I do some stuff like deep breaths to calm down. (female, 12, A)

I used to be involved in soccer and I am going to go into basketball. You can use this in those other sports, too. And at home I find a place to sit and think about

breathing (female, 9, B)

4. Perceived effects. The swimmers also indicated that they believed the mental skills were effective in helping them to swim more successfully and plan for competition in a more positive manner.

Maybe [mental skills] will help me swim better, have a better stroke and be prepared for my race. (female, 11, A)

I think it helps because I am very close to my 'B' time now and before I wasn't. (female, 12, A)

I am more positive and I prepare myself better for competition and in workout and before I swim. (male, 12, A)

It [the program] was good. It helped me because after my race I used to cry because I didn't get my best time. So it helped me not to cry. And I used to hyperventilate. So it helped me not to do that. (female, 9, B)

It [the program] helped me think about some of my races. It helped me get a better time. (female, 12, B)

The mental skills got us to think more about our problems and it got me more confident in myself about sports. (male, 12, B)

Mental skills questionnaire data.

The swimmers' responses to the specific mental skills exercises that were discussed in the group sessions are summarized in Table 9. This table shows the number of swimmers in group A (bold numbers) and group B (italicized numbers) who responded that they were happy, neutral or unhappy with each of the mental skills exercises. Following the table, other questionnaire data will be presented according to the mental skill.

Table 9 - Swimmers' Ratings of Specific Skill Exercises

Mental Skills	Exercises						Ratings
Self-Awareness	#2	#6	#7	#9	#10		
	4*4**	2 4	1 4	1 3	1 4		Happy
	2 1	2 1	3 1	1 2	1 2		Neutral
			2				Unhappy
Goal-Setting	#3	#5	#9	#10			
	3 3	4 4	5 4	5 5			Happy
	2 2	1 3	2	1			Neutral
	1		1				Unhappy
Relaxation and Energizing	#2	#3,4,5	#6	#7	#8	#9	
	1 5	5 5	3 2	3	2 4	3 4	Happy
	5	1 1	2 3	6 2	2 1	3	Neutral
					2	1	Unhappy
Self-Talk	#3	#4	#6	#10			
	4 5	4 5	3 3	5 5			Happy
	2	2	1 2	1			Neutral
			2				Unhappy
Imagery	#2	#3	#4	#9	#10		
	5 3	3 2	6 3	5 2	5 4		Happy
	1 2	2 3	2	1 3	1 1		Neutral
							Unhappy
Attentional Control	#2	#3	#4	#9			
	3 2	2 2	2 3	3 3			Happy
	2 3	3 3	3 3	3 2			Neutral
							Unhappy
Ideal Performance State	#7	#9					
	1 2	4 4					Happy
	5 3	2 1					Neutral
							Unhappy

(NB: Numbers indicate how many swimmers in each group responded that they were happy, neutral or unhappy with each mental skills exercise.)

***bold numbers indicate swimmers in group A**

****italicized numbers indicate swimmers in group B**

Self-awareness questionnaire. **Group A.** Two of the swimmers reported that they were unhappy with the exercise, 'Increasing my feelings of self-confidence.' This exercise asked the swimmers to brainstorm thoughts, feelings and actions that could help them feel more confident in a variety of competitive settings. Although the swimmers

participated in the group discussion of this exercises, it was more difficult for them to articulate specific exercises to increase self-confidence. When asked if the skill of self-awareness was an important skill to learn, 66% (n=4) of the swimmers indicated that it was an important skill. The other swimmers indicated that it would depend on the individual if the skill was important. Comments from the swimmers included: *"It is important because you need to know about yourself and how you feel," "It is important because some people are not aware of their strengths," "I think it is important but I don't know if it would help me."*

Group B. When asked if they would use the skill of self-awareness in the future, 66% (n=4) of the swimmers indicated that they would use it in the future. The other swimmers indicated that it would depend on the situation if the skill would be used again. The swimmers indicated that they remembered: the story, the triangles (Exercise #6 - 'Important physical and important mental skills') and the 'All about me' exercise. The list of things they would do to use the skill of self-awareness included: talk positive to myself, think about myself and find new ways that help me get pumped up. Other comments from the swimmers regarding why they would use this skill included: *"Because I cry after my race,"* and *"To know how to pump me up and get me excited."*

Goal-setting questionnaire. **Group A.** One of the swimmers reported that he/she was unhappy with the exercise, 'My motivational forces' which asked swimmers to list reasons why they participate in their sport. When asked if the skill of goal-setting was an important skill to learn, 100% (n=6) of the swimmers indicated that it was an important skill. Comments from the swimmers included: *"It is important because you need to be*

able to have something to look toward," "I think we need goals to help make us see ourselves better," "The chapter has changed the way I looked at goal-setting because now I know how important it is."

Group B. One of the swimmers reported that he/she was unhappy with the exercise, 'Stepping Stone' which asked swimmers to list short term goals that can help them to attain a long term goal. When asked if they would use the skill of goal-setting in the future, 66% (n=6) of the swimmers indicated that they would use goal-setting in the future. These swimmers again indicated that future use would depend on the situation. The swimmers indicated that they remembered: the stepping stone exercise, the self interview, the accomplishment exercise, skill and strategy goals and that long term goals consist of short term goals. The list of things they would do to use the skill of goal-setting included: 'thinking about my race more' and 'using self-talk.' Other comments from the swimmers regarding why they would use this skill included: *"Because I do not set goals now," "During my race, if I set a goal, it will motivate me to do well,"* and *"Because we must challenge ourselves with goals in both physical and mental stuff."*

Relaxation and Energizing questionnaire. Group A. Two of the swimmers reported that they were unhappy with the exercise, 'Tension Releasers' which asked swimmers to add to a list of ways to relieve their tension. Swimmers had a difficult time responding to this question during the session. When asked if the skill of relaxation and energizing was an important skill to learn, 50% (n=3) of the swimmers indicated that it was an important skill while the other 50% indicated that the importance depended on the individual. A comment from one of the swimmers was: *"It is important because some people get really*

nervous and break down." In response to the question asking them to list 2 things they learned in the chapter and session on goal-setting, swimmers listed: breathing exercises like deep breathing, hokey-pokey (or the energizing exercise), to relax before the meet and the garbage bag exercise.

Group B. One of the swimmers reported that he/she was unhappy with the 'Energizing Exercise', which asked swimmers to move their body around in an attempt to energize themselves. When asked if they would use the skill of goal-setting in the future, 60% (n=5) of the swimmers indicated that they would use relaxation and energizing in the future. The swimmers indicated that they remembered: the garbage bag exercise, the breathing exercise, and ways to energize. The list of things they would do to use the skill of relaxation and energizing included: get a message, take the bad things out of my mind and think about pumping up my body. Other comments from the swimmers regarding why they would use this skill included: *"I liked the bagging exercises because I let go all of my bad feelings. I liked the breathing and relaxation because it helps me whenever I need to relax or calm down," "So I do not hyperventilate" and "To energize and relax me."*

Self-Talk questionnaire. **Group A.** Two of the swimmers reported that they were unhappy with the exercise, 'Affirmation Statements' which asked swimmers to create several affirmation statements regarding physical and mental skills to improve. During the sessions, swimmers enjoyed the cue word exercises but were less enthusiastic about the statement exercise. When asked if the skill of self-talk was an important skill to learn, 66% (n=4) of the swimmers indicated that it was an important skill. While the others felt

that the importance depended on the individual. Comments from the swimmers included:

"It is important because it helps you feel more positively" and *"It is important because you can use cue words during your race."* In response to the question asking them to list

things they learned in the chapter and sessions on self-talk, swimmers responded with: cue words, how to change negatives to positives and that negative thoughts can effect you.

Group B. When asked if they would use the skill of self-talk in the future, 100% (n=5) of the swimmers indicated that they would use self-talk in the future. The swimmers indicated that they remembered: cue words, that self-talk can help to improve self-confidence and that self-talk can be cue words and affirmation statements. The list of things they would do to use the skill of self-awareness included: talk to myself, and use cue words. Other comments from the swimmers regarding why they would use this skill included: *"Self-talk might help me to swim faster," "It will help me to build my confidence,"* and *"This [mental skill] was fun but not as fun as the others."*

Imagery questionnaire. **Group A.** When asked if the skill of imagery was an important skill to learn, 66% (n=4) of the swimmers indicated that it was an important skill. Again, the others felt that the importance depended on the individual. Comments from the swimmers included: *"It is important because it helps you to see yourself," "It is important because if you imagine your race, you will win," "It depends if you don't need it or it doesn't work well for you."* In response to the question asking them to list 2 things they learned in the chapter and session on imagery, swimmers listed: the Bernie Bulldog imagery, timing each other's race imagery and imagery can help in thinking about a race.

Group B. When asked if they would use the skill of imagery in the future, 83% (n=5) of the swimmers indicated that they would use imagery in the future. The swimmers indicated that they remembered: the bulldog imagery, Ricky Rat's headlines, performance imagery, using all of the senses in imagery and imagery should be in detail. The list of things they would do to use the skill of imagery included: using self-talk, timing my race, and using relaxation with imagery. Other comments from the swimmers regarding why they would use this skill included: *"It would help me perform at my peak," "I liked imagining the flower and bulldog. I liked the timing of my race. It was fun and something different,"* and *"It will help me concentrate on the events that I will be swimming."*

Attentional Control questionnaire. **Group A.** 66% (n=4) of the swimmers indicated that attentional control was an important skill and one in which they would use in the future. The swimmers were not able to indicate specific things that they would include in their plan to use the skill of attentional control. In response to the question asking them to list 2 things they learned in the chapter and session on attentional control, swimmers listed: performance distractors, meditation and developing routines.

Group B. The swimmers were not able to indicate specific things that they would include in their plan to use the skill of attentional control. In response to the question asking them to list 2 things they learned in the chapter and session on attentional control, swimmers responded with: zone and centering exercises. When asked if they would use the skill of attentional control in the future, 66% (n=5) of the swimmers indicated that they would use attentional control in the future. The list of things they would do to use

the skill of attentional control included: encourage myself, and use things like saying "Keep up the turnover". Other comments from the swimmers regarding why they would use this skill included: *"Self-talk will help me to concentrate on my race,"* and *"You can use meditation to start to clear you head"*.

Ideal Performance States questionnaire. **Group A.** When asked if the skill of creating and maintaining IPS was an important skill to learn, 100% of the swimmers indicated that the importance of creating an ideal performance state in the future depended on the individual and the situation. In response to the question asking them to list 2 things they learned in the chapter and session on IPS, swimmers listed: to use your mental skills before a race and how to deal with performance distracters. Swimmers were unable to list specific skills or exercises they would include in their plan to create an ideal performance state.

Group B. When asked if creating and maintaining ideal performance states was an important skill to learn, 50% (n=6) of the swimmers indicated that the importance of creating an ideal performance state in the future depended on the individual and the situation. The other swimmers indicated that it would be an important skill for anyone in any situation. In response to the question asking them to list 2 things they learned in the chapter and session on ideal performance states, swimmers responded with: mental skills can help you to prepare for a race and knowing what to do when you get upset. Swimmers were able to list specific skills or exercises they would include in their plan to create an ideal performance state. These included: cue words, imagining your race, and breathing deeply.

Parent questionnaire.

The parent questionnaire was sent home with each of the swimmers following their interview. Of the 7 swimmers aged 12 and under in the group A, 4 parental questionnaires were returned (57%). In group B, of 6 swimmers aged 12 and under in the group, only 3 parental questionnaires were returned (50%). Two of the swimmers in group B were sisters; therefore, one of the questionnaires discussed both of these young girls.

When asked if the swimmers had ever mentioned any of the skills or exercises to them or other family members, 100% of the parents who returned the questionnaires responded that their children had shared information about the program with them.

Comments included: *"She loved to read the stories to me," "He talked about goal-setting and positive self-talk," "She mentioned putting your problems away in a bag," "Both girls loved to talk about what they were doing and were very excited about the things that they were learning. They particularly mentioned a poem on 'self' and they mentioned this to other friends as well."*

All of the parents (100%) indicated that they read or looked at *"a few of the chapters."* One parent commented that, *"We reviewed her work periodically and read though a few of the chapters."* When asked to comment on the workbook, responses included: *"The content covered many valuable skills and important topic areas for serious athletes. She indicated she was benefitting from the skills covered so we were satisfied with her participation," "I was impressed with how well the workbook was done. Not only is mental training good for the swimmers but also very important for our family because the*

commitment is huge," "I felt the material was excellent."

When asked if the swimmers taught them any specific exercises or skills, 75% (n=3) of the parents who returned the questionnaires in group A responded, "Yes." These swimmers taught their parents how to make "reachable goals" and "how to relax." All of the parents (100%) reported that they felt their children enjoyed the program and benefitted from their participation in the mental skills training sessions. Comments included: *"I don't think she thought mental training was important until she took part in the mental training. The skills she learned will benefit her in all aspects of her life," "It is an area of interest to him. He talked frequently about the importance of goal-setting and a positive mental focus," "She realizes that most anything is possible and that mental training can help."* Comments from the parents of group B were: *"I was happy to hear that her breathing was more under control at meets lately. She seemed to think that this was because of some of the things she learned about mental skills," "He seemed very interested in getting to the sessions. Also he seemed to settle down and stay on task in other activities around the house and at school during the program."*

Coach's questionnaire.

From the investigator's perspective, the coach of group A (coach A) had a commitment to helping her swimmers to develop strong mental skills. She indicated that she had read A Mental Skills Training Program (Hogg, 1997c) and was aware of the workbook for young athletes used in this study (Hogg, 1997a). In discussions with her throughout the program, it was clear that the swimmers discussed the mental skills training program with their coach as she was aware of both the mental skills and

exercises included in the sessions. She mentioned to the investigator several of the exercises and mental skills that the swimmers had stated were the most effective for them. This coach would sit in on the second half of sessions and would take time to share her observations with the investigator throughout the program. The coach of group B (coach B) was also aware of the importance of the mental skills program but was not as talkative about the swimmers' use of the activities and exercises. This coach sat in on two sessions in the beginning but did not continue throughout the program. Both coaches were asked to rate the mental skills and provide feedback (see Table 10).

Table 10 Coach's Ratings of the Mental Skills from 1(not helpful) to 5 (very helpful)

Mental Skills	Coach A	Coach B	Comments
Self-Awareness	5	4	"My swimmers understand they are in control of themselves if they are self-aware (A)." "I'm not sure if all the swimmers learned this fully(B)."
Goal-setting	4	5	"They are still having trouble understanding that they must have little goals to achieve their big goals (A).""All the swimmers started talking about their goals (B)."
Relaxation and Energizing	4	3	"All the swimmers told me they had a lot of fun with energizing (A)." "The swimmers did not speak of this (B)."
Self-talk	5	3	"They learned to listen to themselves and their body (A)." "They used the cue words a lot (B)."
Imagery	3	4	"They do not quite grasp this area (A)." "Swimmers used this skill and asked me to help them by timing the imagery(B)."
Attentional Control	5	3	"All swimmers did well with this. I notice this skill even in workout (A)." "This skill was great but they didn't enjoy it (B)."
Creating and maintaining ideal performance states	4	3	"Swimmers did understand this but need to work at it all the time (A)." "I think they need work with this (B)."

The coaches were also asked to answer a group of questions with respect to each separate young swimmer. When asked if each of the swimmers enjoyed the program, coach A indicated that 100% of the swimmers did enjoyed the program while coach B indicated that 66% (n=4) of her swimmers enjoyed the program. Both of the coaches indicated that all of the swimmers benefitted from the program. When asked if the swimmers had learned how to apply the mental skills or were actively applying the skills, coach A indicated that 57% (n=4) of the young swimmers had or were accomplishing this objective while coach B indicated that 100% of the swimmers were applying the skills. The coaches also included specific comments about each of the swimmers.

Group A

She participated well, but she still needs to learn how to apply the mental skills into her sport. (regarding a female, 12)

She did learn about each skill, but is still working at how to combine them into workout or a meet. (regarding a female, 11)

She did very well and learned how to use some of the skills in workout, but still needs to understand all of the skills fully. I have been going over some of the skills with her again. (regarding a female, 11)

She did very well and from a coach's point of view is like a new swimmer. She works on the mental skills all the time and is even working on them in a meet situation. (regarding a female, 12)

He has really improved with this program. He now understands he has control over himself. His workouts have improved and his performance in meets has been great. (regarding a male, 12)

She has improved in some areas but still unsure how the skills can benefit her. (regarding a female, 12)

She has learned the program and also learned how to apply them to her sport. (regarding a female, 10)

Group B

He really used the visualization skill. He would come to me before a race and go through his strategy mentally by visualizing how he would swim. (regarding a male, 12)

She took the mental skills training very seriously. She tried to apply all the skills she learned. The one skill that she was most focused on was goal-setting. (regarding a female, 10)

She really liked to visualize as well as to write down her goals. She did do this before the classes started, but I think the classes reinforced the importance of doing so. (regarding a female, 12)

I think she was a bit too young to understand the importance of mental training skills, but because of her swimming ability she needed to be aware of them. She didn't know how to accept the fact that she could not make all of the goals she set for herself. (regarding a female, 9)

She had a huge turn around by the end of the year. Her whole attitude changed, and she became more focused on swimming by mid-year. I can't say that it was only the program that changed her but I think it helped. (regarding a female, 12)

Before his races, he sat down and visualized his race. I know that he took the visualization quite seriously. (regarding a male, 11)

Discussion

"Hey, guys, it's time for psycho training." When one of the female swimmers yelled this in an attempt to hurry the males out of the change room and into the classroom, myself and the other graduate student who was attending each of the sessions could not help but laugh. I thoroughly enjoyed each of the mental training sessions as each day the young swimmers would contribute their ideas and opinions on a procedure that was meaningful for me. By a procedure, I mean the introduction and assisting in the application of a group of mental skills with young athletes 12 years of age and under.

Not only did I enjoy implementing the program, I also learned a great deal from the swimmers and the process of teaching the skills. From the accounts of parents, coaches and the swimmers themselves, the swimmers also enjoyed the program and they perceived that they had learned about the skills and how to use them in competition and other settings. In the following section, the findings of this study will be discussed.

Mental skills training program. In the previous studies involving the implementation of a mental skills program or intervention, the design of the study or intent of the researchers had not been to identify specific exercises or components of the program that the participants enjoyed or disliked. However, as one of the purposes of this study was to gather specific information regarding the implementation of the program, it was felt that the perspectives of the participants regarding the specific program components was important. The young swimmers clearly stated that they enjoyed the group sessions as they were able to share their ideas and tell their stories while hearing the stories and experiences of their teammates. It is not surprising that the group discussions were enjoyed by the young swimmers as, according to Johnson and Kottman (1992), individuals 12 years of age and under enjoy hearing and telling stories about themselves and others. Group discussions should be included in future mental skills training programs with this age group or, at the very least, program leaders should encourage input from the swimmers during any sessions. Encouraging the participants to share their input about the program can help to develop rapport between the athletes and the program leader or coach (Boggs & Eyberg, 1990).

Group B was more activated and vocal than group A. This was not always for the

better as these swimmers often became overly activated and at times it was difficult to stay on topic. One swimmer in group B indicated that the sessions were boring at times because everyone would speak at once. In this way, the groups of swimmers were different; however, the responses of the swimmers within both groups to questions in the interviews and on the questionnaire were similar in all respects without contradictions. A program leader must take responsibility to ensure the group does not become so chaotic the swimmers are not learning anything from the discussion. The questionnaires were fully completed by more of the participants in group B. This increased participation in the questionnaire completion could have been the result of the change in the wording of the questions or may have been a carry over effect of the differences in the swimmers' desire to express themselves in the sessions. This need to express their ideas may have transferred from the group discussions to the questionnaires. The composition of both groups were similar in age and commitment levels. Both groups also included 13-14 year old swimmers who may have had an effect on the discussions of the groups.

Exercises or components of the program that actively involved the swimmers were indicated as more enjoyable. For example, the swimmers stated that reading the text was more interesting than listening to the investigator read. Exercises involving breathing and imagery were consistently mentioned as worthwhile exercises. Swimmers in both groups were more engaged by the types of activities and exercises which asked the swimmers to do things or to use their bodies in some way. It has been suggested that young athletes of this age group are more interested in active exercises (Johnson & Kottman, 1992). Individuals 12 years of age and under are often restive and do not enjoy sitting for long

periods of time. Cox and Orlick (1995) encouraged program designers to engage the interest of younger athletes by including the aspect of fun in the activities used to introduce mental skills strategies.

Swimmers also listed program components such as poems and quotations as interesting, fun and important for them. Group B was completely engaged by the modified parking exercise, an exercise in the chapter on the skill of relaxation and energizing. This exercise did not involve any physical activity but motivated the swimmers to think about their worries and assisted them in letting go of those worries. This suggests that for some athletes fun exercises do not need to include a physical component.

Mental skill training workbook. The exercises and the concepts discussed during the mental skills training sessions followed from Mental Skills for Young Athletes (Hogg, 1997a). Therefore, the swimmers' perspectives on the components of the workbook were also deemed important to evaluate. In the opinion of the majority of the swimmers, the use of the animal characters was too widespread or confusing. They suggested that the number of characters could be reduced or one of the characters could introduce and be involved with one specific chapter. For example, in the chapter on relaxation and energizing, Manny Moose could introduce the concepts, share information as well as provide instructions for each of the exercises following the introductory story. Orlick and McCaffrey (1991) suggested that mental skills training for young athletes should be simplified as compared to similar training with older athletes. There has been encouragement for the actual use of metaphors in teaching difficult concepts to

individuals under 12 years of age in the sport domain (Johnson & Kottman, 1992; Orlick, 1996). Only one swimmer was unhappy with the use of the animal metaphors in the workbook. This program could continue to use the metaphor with possibly less characters involved in the stories and exercises.

The swimmers could each identify at least one of the components of the workbook that they enjoyed or to which they related. For example, one of the swimmers indicated that her attention span was not long enough to read each of the stories at the beginning of the chapters. However, she did indicate that the quotes and poems held her attention and were interesting. The workbook provided a wide variety of components designed to introduce the mental skills. It is believed that the wide variety of exercises and reading materials presented in the workbook allowed each swimmer the chance to relate to something that introduced the concepts and exercises of each the mental skill. A variety of exercises should be included in future mental skills training program design or implementation.

Swimmers in both of the groups discussed when and how they would use the workbook in the future. This finding indicates that the swimmers may have perceived that this program was designed to introduce the mental skills and specific exercises to use the skills but that their application of the skills did not end with the conclusion of the program. The coaches also stated that the swimmers would need to continue working on the mental skills included in the text. The swimmers stated that they would review the workbook and the exercises at a competition, at the beginning of a new season, if they were having trouble applying one of the skills or if they needed to remind themselves of

the exercises. During a second reading of the text, the swimmers who were not able to take meaning from the animal characters may relate to the characters who represent some of their specific attributes.

It was believed that the teaching and integration components of the model on which this mental skills training program is based were completed during the program. Monitoring, evaluating and refining are the next components of the mental skills training model (Hogg, 1997c). Hogg (1997c) stated that "athletes are never quite finished learning the full effects of mental skills, and should be exposed to them gradually and completely through their career" (p. 18). The young swimmers in this study indicated that they were aware that their use of the mental skills did not finish with the completion of the program. The swimmers may have indicated that monitoring their use of the mental skills, evaluating their effectiveness, and refining the skills for their personal use are the next steps in the use of the mental skills of which they perceive they are now aware. For example, a female swimmer stated that she used relaxation and self-talk to help herself reduce the instances when she hyperventilates. She stated that if she begins to over breathe in the future (monitoring) she will look back to the exercises (evaluating) and try the exercises once again (refining).

Awareness of the mental skills. Findings suggested that the swimmers' perceived that their knowledge of mental skills evolved from general knowledge of what they should be doing or feeling in competition or practice. Several of the swimmers indicated that they knew of the skills before the program began but not their labels or the exercises that they could employ to apply the skills in different situations. Parent questionnaires

also supported the finding that the swimmers' awareness of the mental skills was enhanced. The young swimmers knew about the mental skills but may not have been able to manipulate them to their advantage. Several of the parents indicated that they perceived that their swimmers were now aware of the mental skills and they were aware of the importance of applying the mental skills. From their perspective, the coaches felt that all of the swimmers became aware of the mental skills. The swimmers were able to list the mental skills included in the program and the specific exercises during the interviews.

Gould et al (1993) asked young athletes their perspectives on stress management. The athletes responded that coaches and parents encourage them to be relaxed or to 'play your own game' (p. 292). The athletes felt that this type of encouragement did not include any specifics as to how to relax or how to play their own game. The swimmers involved in this study were able to articulate the general mental skills or the six foundational mental skills that were included in this program. The skills of goal-setting, relaxation and energizing, self-talk and imagery were listed during the interviews with more frequency but self-awareness and attentional control were also included by some. Following the program, the swimmers in this study spoke of the specific exercises that the athletes interviewed by Gould et al. (1993) may have not been able to express. The swimmers were able to discuss the exercises such as: deep and ratio breathing, parking or bagging exercises, imagining your race, the energizing exercise, meditation, and developing cue words for competition.

Findings reported by Gould et al (1990) indicated that exercises designed to apply

mental skills in wrestling competition requiring 'on-the-mat' practice were rated as more important. These exercises were relaxation and visualization/ imagery exercises.

Researchers suggested that, as a result of the active nature of the relaxation and visualization/imagery exercises, they were made more salient for the athletes. In this study, the young swimmers were more apt to list the mental skills in which exercises had a physical component. However, there were few differences in the swimmers ability to discuss how and when they would use each of the six skills. The findings in this study indicated that the swimmers felt they enjoyed the mental skills in which more active exercises were a part but also perceived an importance of being aware of each of the mental skills despite the type of exercises used to introduce the skill.

Hellstedt (1987) reported that athletes involved in a mental skills training intervention rated practical strategies used to manage competitive anxiety and stress as most useful. Although these strategies are important, Hellstedt (1987) suggested that the conceptual material included in the intervention was also important and should be included in future mental skills training interventions. An understanding of the basic theory of mental skills training can only help to provide a good base on which to practice and apply the skills in a variety of settings. The conceptual or 'talking' exercises, as they were referred to by the swimmers in this study, were not always the most popular exercises included in this program. These components included: reading appropriate passages in the stories, discussing relevant words, as well as discussing many of the written exercises. However, it is believed that the swimmers in this study perceived that they became aware of the mental skills, of when and how to use them and were actually using them due to a strong

understanding of the mental skills included in the program. This understanding was developed through the introduction and discussion of all the concepts and exercises relating to the mental skills.

Around at the age of 10, children are able to understand themselves in terms of both their physical and mental characteristics (Stone & Lemanek, 1990; Harter, 1988). Therefore, it is not surprising that the swimmers in this study were only beginning to be able to articulate their mental attributes and that this ability may have been enhanced during the program. The swimmers were able to discuss both their physical and mental attributes as the program progressed. The swimmers were not experienced in discussing their mental attributes; therefore, the discussions during the sessions was another step in educating the young swimmers about mental skills. Following the program, several of the swimmers in both groups discussed how they perceived that their personal characteristics dictated the mental skills that they should use or those that help them in competitive situations. They spoke of the skills that were effective as well as the skills which did not come easily to them but that they felt were important nonetheless.

How and When to use the skills. The swimmers in group A did not consistently express how they would use the mental skills on the questionnaires. As stated above, during the interviews at the end of the program, each of the swimmers were able to articulate specific exercises they would employ to use the specific mental skills. The swimmers in group B were more expressive in the skills questionnaire but provided similar answers in the interview as group A. The difference in the completion of the questionnaires could be accounted for by the individual differences of the swimmers in

each of the groups or as a result of the altered wording of the questionnaires. It was believed that both factors played a role as the differences in the need of the two groups to express their opinions was palatable and as several of the questions were made more simple and clear for group B. However, the responses to the interview questions and the few parental questionnaires that were returned remained stable from one group to the next.

During the mental skills training sessions, the swimmers in both groups had difficulty initially identifying those exercises learned or executed during the sessions as ways in which they could apply the mental skills. For example, in the discussions of 'Tension Releasers', 'Getting into the zone for concentration' and 'Increasing my feelings of self-confidence', the swimmers were not able to articulate the specific activities they would use to achieve relaxation, concentration or confidence. The investigator was required to assist the swimmers to develop a list of exercises or activities that included those previously discussed in the sessions. We had discussed or had actively done breathing and progressive relaxation exercises, meditation exercises and cue words and positive self-talk exercises. Connecting these exercises with the application of the mental skills did not spontaneously occur.

At the age of 12, young individuals begin to develop an ability for more difficult conceptual thought (Johnson & Kottman, 1992). It seemed that a difficult concept for the young swimmers was to understand that the learned exercises could be used to apply the mental skills to athletic settings. During the mental skills training sessions, the investigator was active in helping swimmers to make the connection between the

exercises and activities presented in the workbook and the application of these exercises.

It is strongly encouraged that this connection is made initially by program leaders involved in the implementation of future mental skills training programs. Without the connection between the exercises and the application of the mental skills, the athletes may become aware of the mental skills but will not perceive how to utilize them in a variety of athletic situations or other life situations.

Although the connections between the specific exercises and application needed to be made for the swimmers during the sessions discussions, the swimmers in both groups were able to then discuss these exercises in the interviews and in some cases on the questionnaires. There were group differences in the responses of the swimmers as to when they would use these exercises and activities. The swimmers in the first group were able to articulate a variety of instances in which they would use the mental skills. These instances were: in competition, in practice, at home and at school. Findings indicated that these swimmers perceived that the mental skills discussed in the program could be applied in life situations that went beyond the swimming pool setting. The second group of swimmers identified competitive settings in swimming as well as other sports like hockey and soccer in which they could apply the mental skills.

Using the mental skills in other areas of life is deemed very important for individuals including young athletes (Cox & Orlick, 1996; Weiss, 1991; Orlick & McCaffrey, 1991). It is believed that the development of mental skills can assist young individuals to be more positive about themselves as well as to be able to deal more effectively with difficult situations in athletic and other life contexts. Cox and Orlick (1996) found that

the young individuals who participated in their study applied stress reduction strategies to daily life situations which had not been originally discussed during the program. In this study, the first group of swimmers were able to discuss daily life situations, at home and at school, in which they would apply the relaxation skills they had learned in the program.

The coach of group A stated that not all of the swimmers knew when and how to apply the mental skills in competition. However, during the interviews each of the swimmers were able to indicate when they would use the skills and how they would use them in those instances. For some of the swimmers in group A, the use of the skills extended to a variety of situations. In her evaluation, the coach of group A focused on the swimmers' use of the skills in competition; therefore, the lack of congruent responses regarding when and how the swimmers used the mental skills may be the result of the coach's more narrow view of the situations in which the skill could be applied. Parents of both groups of swimmers indicated that their athletes used the mental skills at home. Coaches should be made aware that the application of these skills in daily life situations are as important for young swimmers as their application to competitive situations. The application of the mental skills in daily life situations may not be readily apparent to coaches of young swimmers. This could provide an opportunity for coaches to develop a greater understanding of how each of their swimmers apply the mental skills.

Actual use of the mental skills. The swimmers in both groups were able to relate specific instances when they perceived that they used the mental skills or the specific exercises designed to assist them in applying the mental skills. The swimmers in group A

could provide examples of their use of the mental skills in other areas than competitive swimming. They were able to provide examples from difficult home environments and how they would use the skill of goal setting to plan their school work. One swimmer described an instance in which she used positive self-talk in a practice setting. The swimmers in group B provided examples from swimming competition and other sports like hockey and soccer. Both groups of swimmers discussed how they used the mental skills before, during and after one of the most important meets of their swimming season. Goal-setting, relaxation and energizing, and imagery were skills that were used by the swimmers before competition. Self-talk was used by swimmers during and after competition.

Although evaluating the effects of participation in the mental skills program was not a purpose of this study, the swimmers were able to articulate how they perceived the program had changed or helped them in some way. The swimmers perceived that learning and applying the mental skills had effected them in several ways. They included: increasing the ability to control emotions, developing the ability to relax, enhancing the ability to think positively about a race, increasing or boosting levels of confidence, enhancing swimming ability and improving race times. The coach of group A commented on the changes she perceived in the swimmers. She felt that two of her swimmers had completely changed their attitude regarding competition from the beginning of the program. These swimmers were more positive and she perceived that they were consistently using mental skills to their advantage in competition.

It has been suggested that the participation in a mental skills training program can

result in an increase in athletic performance (Beauchamp, et al, 1996; Daw & Burton, 1994; Li-Wei, et al, 1992; Kendall, et al, 1990; Seabourne, 1985), an increase in self-confidence (Daw & Burton, 1994), enhanced feelings of intrinsic motivation (Beauchamp, et al, 1996) and a reduction of competitive anxiety (Hellstedt, 1987). The investigator felt that evaluating the effects of the program in a reliable fashion would be very difficult due to the nature of the mental skills training program. Swimmers were encouraged to complete the exercises that were not covered during the group sessions on their own time. To reliably evaluate the effects of this training program, the swimmers' effort with the other mental skills exercises and the influence of parents and coaches would need to be included in the evaluation procedures. However, the comments of swimmers, parents and coaches indicated that all involved perceived the program did have effects on the swimmers' attitude and outlook on competition and life activities. Parents also indicated that they felt the swimmers were using the mental skills during their competitions and other life activities as a result of their participation in the mental skills program.

The purpose of this study was to evaluate the swimmers' awareness of the mental skills, their knowledge of when and how to use the skills and their actual use of the skills following a mental skills training program. Similar evaluations were undertaken by Gould et al (1990). Findings suggested that the mental skills workshop in which wrestlers aged 14 to 32 participated was effective in enhancing the wrestlers' knowledge of mental skills and their actual use of the mental skills. Cox and Orlick (1995) evaluated young students' enjoyment and awareness of stress reduction strategies and their use of

these strategies. The students reported that they enjoyed learning the strategies and they were able to provide examples of specific instances in which they used the stress education strategies. Findings of this study indicated that the athletes, parents and coaches perceived that the workbook and the mental skills training sessions were effective in enhancing the young swimmers' knowledge of general concepts concerning mental skills as well as the specific exercises and activities used to apply the mental skills in a variety of situations. The comments of swimmers, coaches and parents indicate that the swimmers developed knowledge of when the mental skills can be used and how the swimmers can use these mental skills. A variety of examples were given by the swimmers indicating that they perceived that they were actually using the mental skills as a result of their enhanced awareness of the mental skills and their understanding of when and how the skills can be used. The swimmers' comments on the mental skills training sessions as well as the workbook were helpful in developing recommendations for coaches and others who implement training programs for young swimmers 12 years of age and under.

The research methods utilized in this study were self-report in nature. Swimmers, parents and coaches were relied upon to provide accurate and trustworthy accounts of their experiences with the mental skills training program. In accepting the accuracy of the reports, it may be concluded that each participant perceived mental skills to be of importance within their sport, other athletic endeavors and on the home front. Not only did participants accept that mental skills have an important role in the pursuit of performance, they also perceived that they were now able to integrate the important

mental skills into practice and competition. These perceptions are of great value as (1) they provide a strong base on which to further develop these skills in specific ways; and (2) the effects of mental skills can be more easily measured with the knowledge that athletes perceive that these mental skills are important for performance.

Conclusions

Recommendations for coaches or others implementing a mental skills training program with athletes 12 years and under.

1. Encourage active involvement of the swimmers during the mental skills training sessions. For example: ask the swimmers to write on a chalk board or dry erase board if available, ask the swimmers to read any stories or exercise directions involved in the program and encourage each of the swimmers to speak of their ideas, opinions or experiences concerning any concepts or exercises discussed during mental training sessions. The swimmers are also engaged by activities that required movement or control over their images.
2. Assist young athletes to understand that the exercises and activities included in a mental skills training program can help them to use the mental skills in competition, in practice and in other life situations. For some young swimmers, the exercises and activities which are introduced may seem simple, fun and enjoyable. It is the responsibility of the program leader to make it clear that these activities and exercises can be used to develop and to apply the mental skills in a variety of situations.
3. Keep the manner in which you present the mental skills as simple and concrete as possible. In this study, the findings indicated that the young athletes did not always

appreciate the metaphorical approach to introducing the important concepts of the mental skills as used in Mental skills for young athletes (Hogg, 1997a).

4. Provide a variety of activities to introduce the mental skills as each athlete may have a different way of learning or may relate to different exercises. In order to address the individual differences of athletes involved in group sessions, it would be important to provide different activities so that each individual may have an opportunity to learn and apply the skills.

5. Encourage the swimmers to continue to apply the mental skills after the program is concluded. The swimmers in this study were aware of the importance of continuing the program which included: integration, evaluation and refinement of the mental skills.

6. Encourage athletes to share instances in which they have applied the mental skills.

Ask them about the specific activities and exercises they used to apply the skill and which skills in particular they used. Also ask athletes if they have used the skills outside of the athletic setting. Athletes 12 years and under should be encouraged to apply these skills in other settings than competition as practicing these skills in many aspects of life can strengthen the skills.

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Appendices

Appendix A - Parental Consent Form

Dear swimming supporters,
My name is Janet Tingley. I am a master's student studying sport psychology at the University of Alberta with Dr. John Hogg.

I am studying the effects of a mental skills program designed to suit the needs of young athletes 12 years and under. I am very interested in how competitive swimmers react to the program. This program is currently in a workbook format. The workbook should be relatively easy for young athletes to use as a means of learning about the mental skills, reaching ideal performance states, and harnessing the emotions for training and competition. It presents the skills of self awareness, goal setting, self talk, imagery, relaxation, and focus/refocusing. Also, sections to help athletes create and maintain ideal performances states and emotional states have been included. The important concepts will be explained using animal metaphors and the participants will be required to do follow up exercises included in the workbook.

I would like to introduce the program in a maximum of 20 sessions of 30 minute periods starting in _____ and finishing in _____. Sessions will be held on _____ and _____ from _____ to _____. At the end of the program, you will be asked to evaluate the process by completing a questionnaire. The evaluation of the mental skills program will also include interviews with your child and asking them to complete specifically designed questionnaires. Time requirements of your child for this investigation include 10 hours of program implementation and a maximum of 1 hour for the follow-up interview. Therefore, the total time requirement is 11 hours.

Keyano Head Coach Marc Trembley and the Group Coach at _____, _____ have given their consent to allow the group of swimmers your athlete trains with to participate. If you feel your swimmer will be able to participate fully in this program, please sign the consent form and return it to coach _____. Thank you for your cooperation.
Sincerely,

Janet Tingley

cc. Dr. John Hogg - Professor and Supervisor
Marc Trembley - Head Coach - EKSC
Leslie Serediak - Group Coach - Bonnie Doon Pool
Karen Brown - Group Coach - Jasper Place Pool

Informed Consent Form
Mental Skills for Young Competitive Swimmers

Investigators: Janet Tingley	phone number: 439-1081
Dr. John Hogg	492-2830
Rebecca Bornemann	435-0323

- * Your child's participation will be confidential. Names and information that may help to identify an individual will not be discussed with individuals outside the investigation. In the written discussion of the program implementation, no names or identifying information will be included.
- * Participant's comments will be discussed only among the researchers. Comments will not be shared with coaches and parents without the consent of the participant.
- * You should feel free to ask the investigators identified above any questions.
- * You may decline your child's participation now, or withdraw your permission at any time throughout the program, for any reason, without any consequences.
- * As a result of this investigative study, it may be possible to modify future approaches and provide useful guidelines for further research in the area of applied mental skills training. Guidelines for coaches and parents may be developed as a result of working with young athletes and the mental skills.

I give my consent for _____ to participate in this mental skills
program (print your child's name)
and investigation. I also understand that my consent can be withdrawn at any time.

(your signature)

(signature of the investigator)

(signature of a witness)

Appendix B- Swimmer's Consent Form
Mental Skills for Young Competitive Swimmers

Giving your CONSENT means that you agree to participate in the program of mental skills training and the evaluation of the program that has been described by Janet Tingley.

You are be able to stop participating in this program at any time without any punishment or consequences. You are able to ask the leader (Janet) any questions about the program at any time.

Anything that is discussed in the program sessions is to be confidential. This means that the leader (Janet) or her helpers will not talk about what has been discussed in the sessions with coaches, parents, or other individuals.

When it comes time to write about the sessions as school work, the leader (Janet) will not use your name or other information that may help others to identify an individual swimmer.

I _____ agree or give my consent to participate in
(print your name)
this mental skills program and the evaluation of the program. I also understand that I can stop participating in the program at any time.

(your signature)

(the leader's signature)

(signature of a witness)

Appendix C- Post-program interview schedule

Show the swimmers their questionnaires. Ask them if they would like to elaborate or talk about any of their answers.

1) Overall, what are some of your feelings about the mental skills training program?

Probes - enjoyable?

- boring?
- a bit of both?

2) How do you feel about the sessions that we had on Tuesday and Thursday?

- length of the session
- amount of sessions
- the swimmers reading passages?
- the exercises we did?
- the group discussions?
- questionnaires?

3) What are your feelings about the workbook which covers the mental skills?

- stories?
- characters?
- exercises?
- helpful? Examples
- useless? Examples
- best parts?
- bad parts?

4) How much of the workbook did you complete/look at/go over?

- the part that was covered in the sessions?
- most of it?
- some of it?
- very little?

5) If you haven't already finished all the exercises, do you think you might go back and finish the workbook?

- why?

6) Do you think you might reread parts of the book sometime in the future?

- what parts?

7) What advice would you give us in order to make the workbook better?

- better exercises? Examples

- different story or characters? Examples
- **prompt with specific skills eg: How would we make the chapter on relaxation better? What about some of the other chapters?**

8) We want to improve the session as well. What specific things can we do to improve them?

- talk about different topics?
- have a different format? Eg: more group discussions, more swimmers reading, etc.

9) Can you name some things that you wouldn't want us to change about

- the workbook?
- the sessions?

10) Can you name some of the mental skills we have been discussing in the last two months?

- **Encourage them to name all 6: self awareness, goal setting, self talk, relaxation/energizing, imagery, attentional control plus IPS**

11) We have been teaching you some mental skills and showing you some exercises to practice those skills. Do you think these skills are important for you to use?

12) Which of the skills in particular do you think are important?

And why those skills? **Talk about each skill they think is important separately**

13) What are some specific exercises that you do now because you have learned about the mental skills in the last few months?

- Is there anything specific you do to perform the skill of relaxation or goal setting or self talk, etc. **or the skill they have identified as important**

14) When do you think would be appropriate (or a good time) to do some of the specific exercises?

- For example, when would you use ____ **Use a skill they have identified as important above**
- another time or place outside of practice or competition?

15) Can you give specific examples of when you have used the mental skills in practice?

- competition?
- Other? Home, school

- 16) Can you name some things that you have learned from the workbook? Skills, Exercises, New Words the sessions? " , " , "
- 17) Do you think that learning about the mental skills has helped you in any way?
- How have they helped you? Examples
- Have they helped you outside of swimming? At home, at school, with you friends?
- 18) What was the most enjoyable part of learning about the mental skills?
- 19) What was the least enjoyable part of learning about the mental skills?
- 20) Do you have any advice for other swimmers that might help them with their mental preparation for swimming?

Appendix D - My feelings about *the skill of self-awareness*

Name: _____

Circle one of the faces below to show what you felt about the story and the activities in the chapter on *the skill of self-awareness*.

The story at the beginning of the chapter


☐


The characters in the story


☐


Exercise #2 - Alphabet of you


☐


Exercise #7 - Self-confidence


☐


Exercise #6 - Triangles of skills


☐


Exercise #9 - Journals


☐


Exercise #10 - Parents/coaches/teammates


☐


List any of your comments on the other exercises, words, or phrases you found in the chapter on *the skill of self-awareness*.

List 2 things you remember from the chapter on *the skill of self-awareness*.

1 - _____

2 - _____

Circle a check (✓) for yes, a question mark (?) for it depends, or an x (X) for no to answer the questions below.

Did you understand the instructions for each of the exercises?

✓ ? X
Yes It Depends No

If you circled the X, what instructions didn't you understand?

Do you think you will use *the skill of self-awareness* in the future?

✓ ? X
Yes It Depends No

If yes, circle the following times when you think you would use this skill.

~before the season ~after the season ~before competition ~after competition

~before a race ~during a race ~after a race ~before practice ~after a practice

~other

Why do you think you would use *the skill of self-awareness* during the times you circled?

List 2 specific things you might do to develop *the skill of self-awareness*.

1 -

2 -

Do you think your friends and the other swimmers your age should learn *the skill of self-awareness*?

✓ ? X
Yes It Depends No

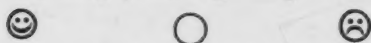
Why do you feel that way?

Appendix E - My feelings about *the skill of goal-setting*

Name:

Circle one of the faces below to show what you felt about the story and the activities in the chapter on *the skill of goal-setting*.

The story at the beginning of the chapter



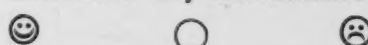
The characters in the story



Exercise #2 - Self-Interview



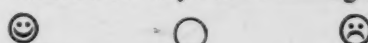
Exercise #3 - My Motivational Forces



Exercise #5 - My Dreams



Exercise #7 - My Goal Planning Sheet



Exercise #9 - Stepping Stone Exercise



Exercise #10 - My Accomplishments



List any of your comments on the other exercises, words, or phrases you found in the chapter on *the skill of goal-setting*.

List 2 things you remember from the chapter on *the skill of goal-setting*.

1 -

2 -

Circle a check (✓) for yes, a question mark (?) for it depends, or an x (X) for no to answer the questions below.

Did you understand the instructions for each of the exercises?

✓ ? X
Yes It Depends No

If you circled the X what instructions didn't you understand?

Do you think you will use *the skill of goal-setting* in the future?

✓ ? X
Yes It Depends No

If yes, circle the following times when you think you would use this skill.

~before the season ~after the season ~before competition ~after competition

~before a race ~during a race ~after a race ~before practice ~after a practice

~other

Why do you think you would use *the skill of goal-setting* during the times you circled?

List 2 specific things you might do to develop *the skill of goal-setting*

1 -

2 -

Do you think your friends and the other swimmers your age should learn *the skill of goal-setting*?

✓ ? X
Yes It Depends No

Why do you feel that way?

Appendix F - My feelings about *the skill of relaxation and energizing*

Name: _____

Circle one of the faces below to show what you felt about the story and the activities in the chapter on *the skill of relaxation and energizing*.

The story at the beginning of the chapter


☐


The characters in the story


☐


Exercise #2 - Parking exercise


☐


Exercise #3,4 and 5 - Breathing exercise


☐


Exercise #6 - Relaxation script


☐


Exercise #7 - Nervous feelings


☐


Exercise #8 - Tension releasers


☐


Exercise #9 - Energizing exercise


☐


List any of your comments on the other exercises, words, or phrases you found in the chapter on *the skill of relaxation and energizing*.

List 2 things you remember from the chapter on *the skill of relaxation and energizing*.

1 - _____

2 - _____

Circle a check (✓) for yes, a question mark (?) for it depends, or an x (X) for no to answer the questions below.

Did you understand the instructions for each of the exercises?

✓ ? X
Yes It Depends No

If you circled the X, what instructions didn't you understand?

Do you think you will use *skill of relaxation and energizing* in the future?

✓ ? X
Yes It Depends No

If yes, circle the following times when you think you would use this skill.

~before the season ~after the season ~before competition ~after competition
~before a race ~during a race ~after a race ~before practice ~after a practice
~other

Why do you think you would use *the skill of relaxation and energizing* during the times you circled?

List 2 specific things you might do to use *the skill of relaxation and energizing*.

1 -

2 -

Do you think your friends and the other swimmers your age should learn *the skill of relaxation and energizing*?

✓ ? X
Yes It Depends No

Why do you feel that way?

Appendix G - My feelings about *the skill of self-talk*

Name: _____

Circle one of the faces below to show what you felt about the story and the activities in the chapter on *the skill of self-talk*.

The story at the beginning of the chapter

☐

The characters in the story

☐

Exercise #2 - Things you do well

☐

Exercise #5 - Word Search

☐Exercise #6 - Affirmation Statements
Words☐

Exercise #10 - 100 m Back Cue

☐

List any of your comments on the other exercises, words, or phrases you found in the chapter on *the skill of self-talk*.

List 2 things you remember from the chapter on *the skill of self-talk*.

1 - _____

2 - _____

Circle a check (✓) for yes, a question mark (?) for it depends, or an x (X) for no to answer the questions below.

Did you understand the instructions for each of the exercises?

✓ ? X
Yes It Depends No

If you circled the X, what instructions didn't you understand?

Do you think you will use *the skill of self-talk* in the future?

✓ ? X
Yes It Depends No

If yes, circle the following times when you think you would use this skill.

~before the season ~after the season ~before competition ~after competition
~before a race ~during a race ~after a race ~before practice ~after a practice
~other

Why do you think you would use *the skill of self-talk* during the times you circled?

List 2 specific things you might do to use *the skill of self-talk*.

1 -

2 -

Do you think your friends and the other swimmers your age should learn *the skill of self-talk*.

✓ ? X
Yes It Depends No

Why do you feel that way?

Appendix H - My feelings about *the skill of imagery*

Name:

Circle one of the faces below to show what you felt about the story and the activities in the chapter on *the skill of imagery*.

The story at the beginning of the chapter


☐


The characters in the story


☐


Exercise #1 - Bulldog imagery


☐


Exercise #2 - Sport Setting Imagery


☐


Exercise #3 - Ricky Rat Headlines


☐


Exercise #4 - Timing your race


☐


Exercise #5 - In practice/competition


☐


Exercise #6 - Performance Imagery


☐


List any of your comments on the other exercises, words, or phrases you found in the chapter on *the skill of imagery*.

List 2 things you remember from the chapter on *the skill of imagery*.

1 -

2 -

Circle a check (✓) for yes, a question mark (?) for it depends, or an x (X) for no to answer the questions below.

Did you understand the instructions for each of the exercises?

✓ ? X
Yes It Depends No

If you circled the X, what instructions didn't you understand?

Do you think you will use *the skill of imagery* in the

✓ ? X
Yes It Depends No future?

If yes, circle the following times when you think you would use this skill.

~before the season ~after the season ~before competition ~after competition
~before a race ~during a race ~after a race ~before practice ~after a practice
~other

Why do you think you would use *the skill of imagery* during the times you circled?

List 2 specific things you might do to use *the skill of imagery*.

1 -

2 -

Do you think your friends and the other swimmers your age should learn *the skill of imagery*?

✓ ? X
Yes It Depends No

Why do you feel that way?

Appendix I - My feelings about *the skill of attentional control*

Name:

Circle one of the faces below to show what you felt about the story and the activities in the chapter on *the skill of attentional control*.

The story at the beginning of the chapter


☐


The characters in the story


☐


Exercise #1 - Word meanings
emotions (1)


☐


Exercise #4 - Identifying your


☐


Exercise #5 - identifying your emotions (2) Exercise #6-How do you feel before a race?


☐

☐


List any of your comments on the other exercises, words, or phrases you found in the chapter on *the skill of attentional control*.

List 2 things you remember from the chapter on *the skill of attentional control*.

1 -

2 -

Circle a check (✓) for yes, a question mark (?) for it depends, or an x (X) for no to answer the questions below.

Did you understand the instructions for each of the exercises?

✓ ? X
Yes It Depends No

If you circled the X, what instructions didn't you understand?

Do you think you will *use the skill of attentional control* in the future?

✓ ? X
Yes It Depends No

If yes, circle the following times when you think you would use this skill.

~before the season ~after the season ~before competition ~after competition
~before a race ~during a race ~after a race ~before practice ~after a practice
~other

Why do you think you would use *the skill of attentional control* during the times you circled?

List 2 specific things you might do to use *the skill of attentional control*.

1 -

2 -

Do you think your friends and the other swimmers your age should learn *the skill of attentional control*?

✓ ? X
Yes It Depends No

Why do you feel that way?

Appendix J - My feelings about *creating and maintaining ideal performance states*

Name: _____

Circle one of the faces below to show what you felt about the story and the activities in the chapter on *creating and maintaining ideal performance states*.

The story at the beginning of the chapter



The characters in the story



Exercise #1 - word meanings



Exercise #4 - Identifying your emotions (1)



Exercise #5 - Identifying your emotions (2) Exercise #6-How do you feel before a race?



List any of your comments on the other exercises, words, or phrases you found in the chapter on *creating and maintaining ideal performance states*.

List 2 things you remember from the chapter on *creating and maintaining ideal performance states*

1 - _____

2 - _____

Circle a check (✓) for yes, a question mark (?) for it depends, or an x (X) for no to answer the questions below.

Did you understand the instructions for each of the exercises?

✓ ? X
Yes It Depends No

If you circled the X, what instructions didn't you understand?

Do you think you will *create and maintain an ideal performance state* in the future?

✓ ? X
Yes It Depends No

If yes, circle the following times when you think you would use this skill.

~before the season ~after the season ~before competition ~after competition
~before a race ~during a race ~after a race ~before practice ~after a practice
~other

Why do you think you would *create and maintain an ideal performance state* during the times you circled?

List 2 specific things you might do to *create and maintain your ideal performance state*.

1 -

2 -

Do you think your friends and the other swimmers your age should learn to *create and maintain ideal performance states*?

✓ ? X
Yes It Depends No

Why do you feel that way?

Appendix K- Parent Questionnaire

Dear swimming supporters,

The mental training sessions have come to a close. Please take a few minutes and fill in this questionnaire. It would be beneficial to the project if each questionnaire was completed and returned.

Three easy steps to completing and returning this questionnaire:

- 1) Answer the questions below and on the next page.
- 2) Return the Questionnaire to the envelope and seal the envelope.
- 3) Drop it in your nearest mail slot.

The envelope is addressed, stamped, and ready to go.

Thank you for you support and participation.

Janet and Rebecca

Please check the appropriate box and answer the questions below. Thanks.

1) Do you feel you were adequately informed about the mental skills training program before the Tuesday and Thursday sessions began?

Yes

☐

No

☐

If you answered no, what could have been done to insure you and other parents or supporters were informed about the program?

2) How much of the workbook, "Mental Skills for Young Athletes", were you able to read or look at?

Most of the chapters

☐

A few of the chapters

☐

Didn't look through the book

☐

Comments:

3) If you have read or browsed through the workbook, what are some of your feelings on both its content (mental skills) and/or presentation (story and exercises)?

4) During the mental skills training sessions, did your swimmer ever mention any of the skills or exercises to you or another family member?

Yes ☐

No ☐

If so, could you provide a brief example?

5) Did your swimmer ever try to teach you a specific skill during the time mental training was occurring?

Yes ☐

No ☐

If so, which skill did they try to teach?

6) Do you feel that your swimmer enjoyed learning about the mental skills through the sessions and the workbook?

Yes ☐

No ☐

7) Do you feel that your swimmer benefitted from participating in the mental skills training sessions and by completing some of the exercises in the workbook?

Yes ☐

No ☐

Please provide some examples as to why you feel your swimmer did or did not benefit from the program?

Please feel free to add any additional comments on the back of this page.

Thank you again for your participation.

Appendix L - Coach's Questionnaire

Please evaluate the mental skills program in which your athletes have been participating. Answer each question honestly. Thank you for your participation and cooperation.

From your perspective, how useful was each program section listed below? Rate each of the skills on a scale from 1 (not helpful at all) to 5 (very helpful).

1) the introduction to mental skills Comments:

1 2 3 4 5
not helpful very helpful
at all

2) the skill of self-awareness Comments:

1 2 3 4 5
not helpful very helpful
at all

3) the skill of goal-setting Comments:

1 2 3 4 5
not helpful very helpful
at all

4) the skill of energizing/relaxing Comments:

1 2 3 4 5
not helpful very helpful
at all

5) the skill of self talk Comments:

1 2 3 4 5
not helpful very helpful
at all

6) the skill of imagery Comments:

1 2 3 4 5
not helpful very helpful
at all

7) the skill of attentional control Comments:

1 2 3 4 5
not helpful very helpful
at all

8) creating ideal performance states Comments:

1 2 3 4 5
not helpful very helpful
at all

For each swimmer, please answer the following questions.

Name of swimmer #1

Do you feel that this athlete enjoyed learning about the mental skills through the sessions and the workbook? Yes ☐ No ☐

Did you feel that this swimmer benefitted from participating in the mental skills training program? Yes ☐ No ☐

Do you feel this swimmer learned specific ways to apply the mental skills to their practice or competitive experiences?

Yes ☐ No ☐

Do you feel this swimmer applied what he/she learned in the program to their sport environment? Yes ☐ No ☐

Please provide a brief example of this swimmer's application of the mental skills or how the swimmer benefitted from the program.

etc for each swimmer.....

Appendix M - Figure 1

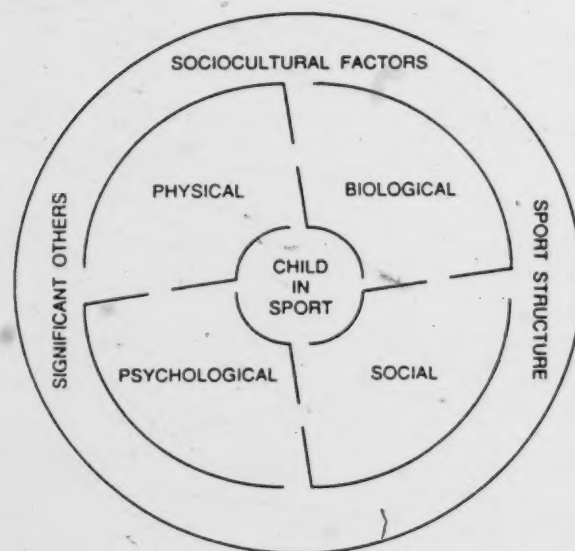


Figure 1 - The Wheel of Child Development depicting an integrated sport science perspective for understanding children in sport (Weiss, 1991, p. 337).